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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

JULY, 1952

Present-day chemicals make hot fire. Flammables employed in one-story plant near Chicago give fire fighters a torrid battle. (Article on Page 542).

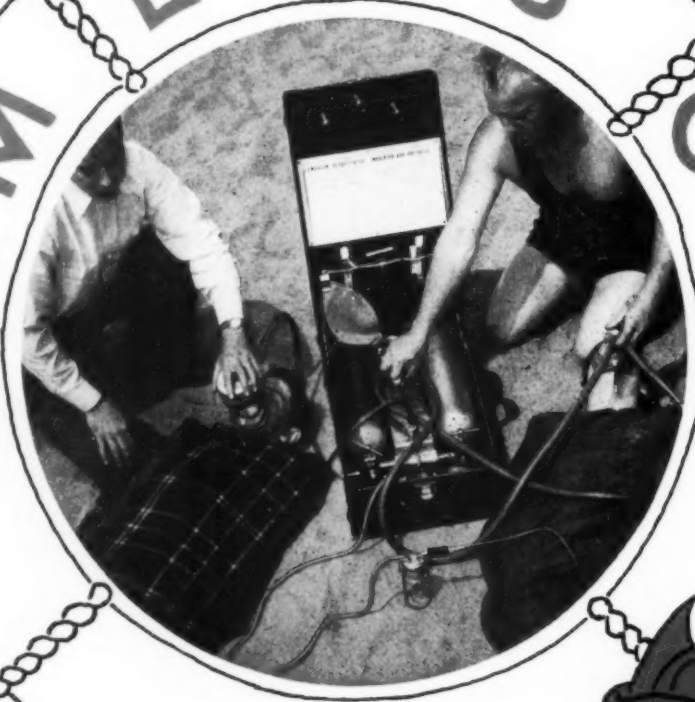
A CASE · SHEPPERD · MANN PUBLICATION

Swimming is great . . . but

are you ready

with the most effective artificial respiration known to science?

EMERSON



EMERSON Resuscitators

"Simplest and Safest"

J. H. EMERSON CO.

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FULL SOUND . . . *all around!*

THUNDERBOLT

GIVES GREATEST RANGE AND PENETRATION OF ALL!

FULL VOLUME AT LOW AS WELL AS HIGH PITCH . . . POWERFULLY BEAMED THROUGH FULL 360°!

No other siren serves as well as the Thunderbolt . . . whether used as your sole sound protection or as the leader of a metropolitan system! Ordinary sirens decrease in volume as pitch goes low . . . the Thunderbolt's volume is constant at low or high pitch. This superior and ONLY TRULY DIRECTIONAL siren is conservatively rated at 126 DB's at 100 feet yet has been officially recorded as high as 138 DB's! This maximum pitch can be adjusted to provide tone of suitable contrast to your local ambient noise levels *without loss* of volume! . . . nor is this terrific sound volume affected by the rotational speed you choose—2-4 or 8 rpm. Federal's sensational new Thunderbolt is in a class by itself. It's the very best you can buy . . . we guarantee it!

Write today for comprehensive literature

- Rotates 360°!
- Produces *full* volume at low as well as high pitch!
- Concentrates sound into beams of warning!
- Rotates 2-4 or 8 rpm!
- Maximum pitch is adjustable for tone of suitable contrast to local ambient noise levels.

FEDERAL ENTERPRISES, INC.

FORMERLY: FEDERAL ELECTRIC COMPANY, INC.

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

CONTENTS

Vol. 105 July, 1952 No. 7

	Page
With the Editor — By Fred Shepperd	495
Fast-Spreading Fire Damages Famed Warner Movie Studios — By Paul C. Ditzel	496
Fire Services Ladders and Their Use — By Roi B. Woolley	499
Industrial Fire Fighting — By W. E. Rossnagel	501
New Haven Fire Department Stages Dramatic Fire Tests — A Staff Report	504
New England Chiefs' Conference Again Breaks Previous Records	506
News of the Manufacturers	512
Short Cuts and Gadgets	514
The Watch Desk — By Roi B. Woolley	516
Convention Dates	519
False Alarms	520
Questions and Answers	522
World-Wide Fire News — By Roi B. Woolley	524
What's Burning?	526
Persons in the News	530
Obituaries	531
Among the Buffs	532
With Our Readers	534
The Round Table — Radio Progress in the Fire Service	536

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Technical Sessions

THESE are the days of conferences, conventions and just plain meetings of firemen of every category—paid, part-paid and volunteers — and those whose calling keeps them in touch with the fire service.

- These are the days of speeches, lectures, panels, round tables, symposiums—and just plain get-togethers where the techniques, strategy and methods of fire detection, control and extinguishment get a thorough going-over.

- These are the days when policies, plans and programs for the never-ending fight against fire, propogate. In short, these are important times in the fire service.

- Wherever these conferences and meetings take place, the technical and business sessions are paramount. Fire fighters take their conferences seriously these days.

- And it is not mere coincidence that seldom is there such a gathering, and seldom a lecture, speech or demonstration on some phase of fire protection and prevention, in which FIRE ENGINEERING is not quoted, referred to and cited as an authority. At no time in the yearly calendar of the fire service is the unique and enviable relation of FIRE ENGINEERING to the fire service more convincingly demonstrated than during these 'get-together' days of the "Service of all public services—the FIRE SERVICE".

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Wastes Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.50 a year; Foreign, $4.50; Single copies, 40c. ¶Member of Audit Bureau of Circulations and Associated Business Publications, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 5, 1879.

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President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representatives, WILLIAM J. GIBSON, ALFRED J. HOUGHTON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICES L. M. ROCHE and ROBERT D. CLEVENGER, 8 So. Dearborn St., Chicago 3, Ill.; LOS ANGELES; AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U.S.A.

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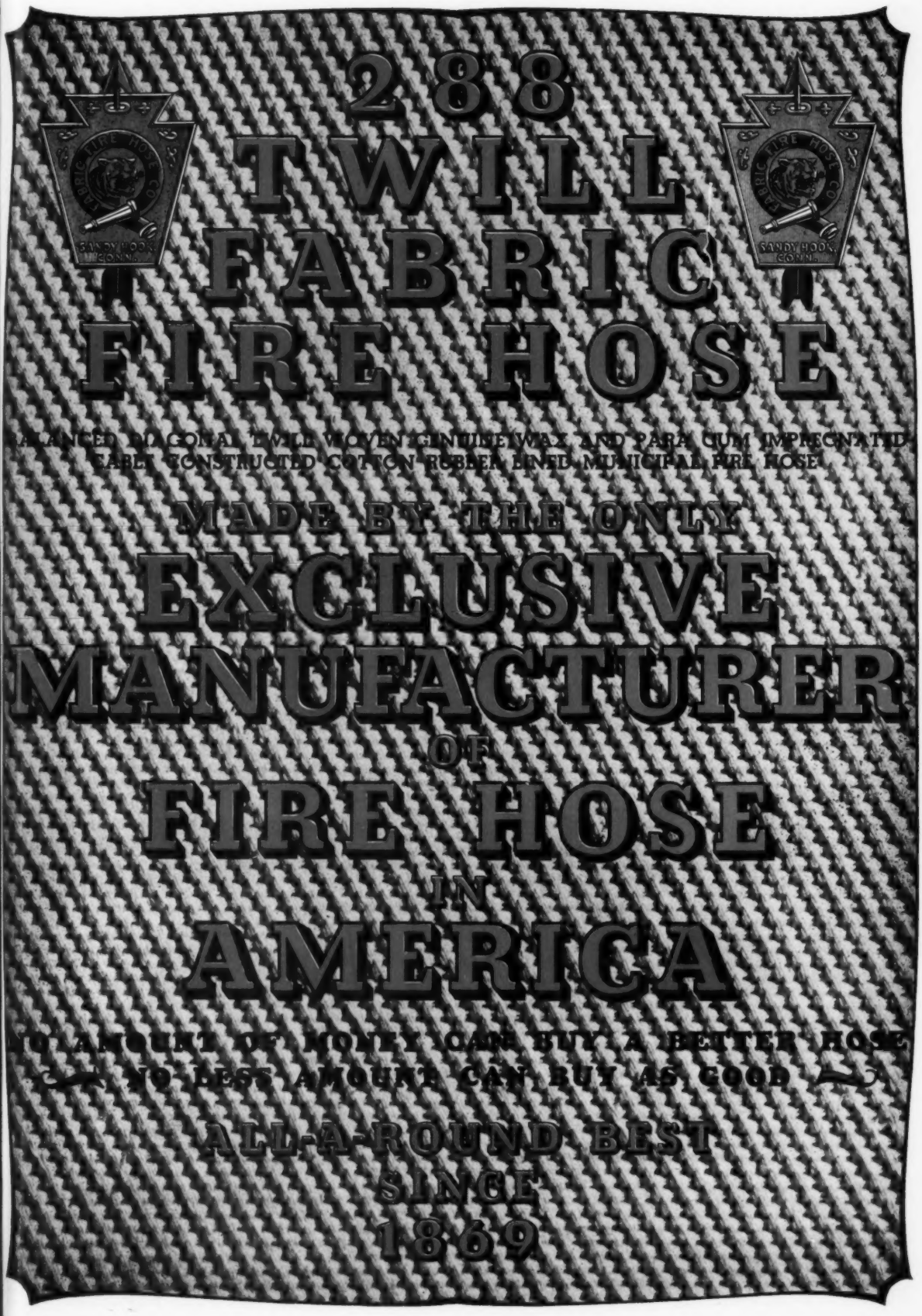
"*Specialized* Leadership"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BALANCED DIAGONAL TWILL WOVEN GENUINE WAX AND PARA GUM IMPREGNATED
CABLE CONSTRUCTED COTTON RUBBER LINED MUNICIPAL FIRE HOSE
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NO AMOUNT OF MONEY CAN BUY A BETTER HOSE
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ALL-A-ROUND BEST
SINCE
1869

DUO Safety FIRE LADDERS

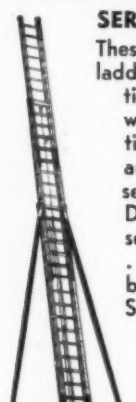
SERIES 525-A

All Aluminum

TUBULAR RAIL

Here's the favorite ladder for service trucks — Duo-Safety's 525-A series, featuring famous Tubular Rail construction. Provides greater strength, light weight, extraordinary safety with a maximum of climbing space and requires a minimum of banking height. Available in all standard ladder sizes in two-section (500-A); three-section (525-A); wall ladders (550A); and roof ladders (575A). Write for free catalog.

...and a companion ladder in wood



SERIES 100

These popular Duo-Safety ladders are of conventional Weston Style wood truss construction. . . . Rung blocks and rails are of well-seasoned high grade Douglas Fir, rungs are second growth hickory . . . all finished with best spar varnish. . . . Series 100 ladders are all built in standard sizes and are equipped with tormentor poles on long extension ladders.

DUO-SAFETY LADDER CORP.

809-11 NINTH ST., OSHKOSH, WISCONSIN

B. F. Goodrich Fire King hose 50% stronger, 12% lighter, takes less space on standard truck bed

Stands higher pressures — tested to 600 pounds

It's a new chemically-produced fiber used as "filler cord" that makes B. F. Goodrich Fire King a stronger, lighter fire hose. These cords go around the hose, carry the load under pressure, and are not affected by water or mildew, mild acids or alkalies.

Lighter, more flexible cord means that Fire King hose is easier to handle, takes up less space. An additional 200 feet of Fire King can be racked on a standard truck bed because Fire King hose is 12 to 15% lighter than other fire hose.

Stands higher pressures — Actual service tests prove that Fire King fire hose is 50% stronger than standard hose which is tested to only 400 pounds pressure. Every length of Fire King fire hose is tested to 600 pounds pressure.

End protection—Fire King has the exclusive patented B. F. Goodrich end protection — an extra ply of hard woven cords extending 12" from the coupling. This adds 100% more strength to the coupling area. Not one single length of B. F. Goodrich fire hose with end protection has ever failed in the coupling area.

Fire King combines all the features of the highest grade B. F. Goodrich fire hose plus the recent improvement — Fire King reinforcing cord. The result is a premium double jacket fire hose 50% stronger, 12 to 15% lighter, yet only slightly higher in cost. It is available in both 1½" and 2½" sizes.

There's a B. F. Goodrich Fire Hose Distributor near you, ready to bring this and other BFG hose improvements to your department. Give him a call, or write *The B. F. Goodrich Company, Industrial & General Products Division, Akron, Ohio.*

Fire Hose
BY
B.F. Goodrich

Actual rescue photo courtesy Pasadena (Calif.) Star-News

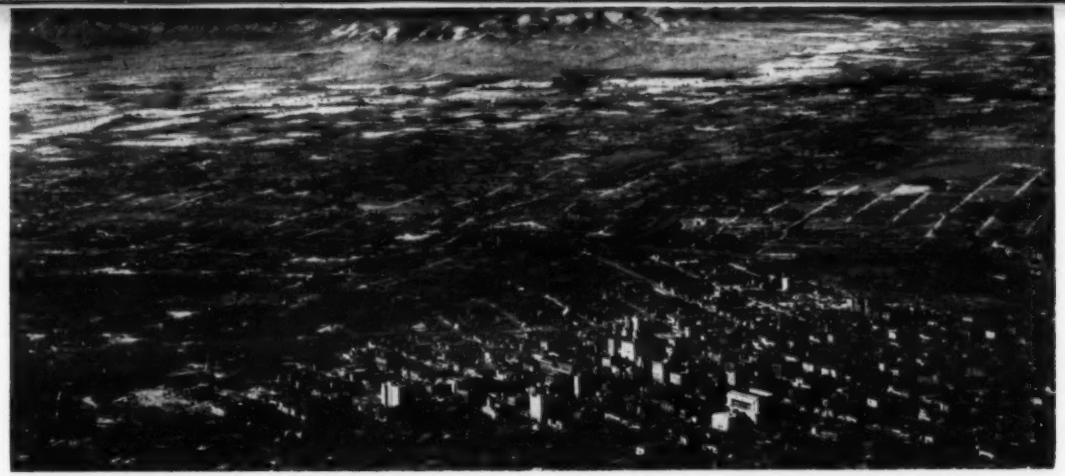
E & J RESUSCITATOR • ASPIRATOR • INHALATOR

For immediate and effective resuscitation of victims trapped or being extricated, rely on the E & J MICRO EXTENSION UNIT. No larger than your hand, no heavier than your shoe, connected by just one hose line to its parent E & J Resuscitator, it is easy to carry and use in tight spots. Learn all about this handy life-saver without delay by writing today to

E & J MANUFACTURING CO. Dept. 522-A, BURBANK, CAL.

Originator and world's principal producer of automatic resuscitators

In Denver



IT'S SEAGRAVE

Denver, the capital city of the state of Colorado and the commercial, manufacturing, financial, cultural and professional capital of the Rocky Mountain West . . . Another of the many thriving, metropolitan cities protected with Seagrave Fire Apparatus.

It makes no difference how large or how small your city . . . there's a Seagrave that will give you efficient, dependable fire protection at economical cost.

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THE SEAGRAVE CORPORATION
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NATIONAL FOAM CONTINUOUS FOAM PRODUCTION SYSTEM

FOAM FACTS

Published quarterly in the interests of fire protection everywhere.

NATIONAL FOAM SYSTEM, INC.

WEST CHESTER, PENNA.

Industry Notes Advantages of New Foamster Over 40-Gallon Foam Engine

Industries everywhere are discovering that the National Aer-O-Foamster, a small, highly flexible unit for fighting flammable liquid fires, has many advantages over the 40-gallon Foam Engine, for years a leader in that field.

The Foamster may be started and stopped at will, but once the Foam Engine is started, the entire charge must be used. By moving one finger, the operator of the Foamster can shift from foam to water, and back again. To recharge the Foamster (change nozzle from empty to full can) takes ten seconds, but recharging the Foam Engine takes two men at least a half hour.

Total cost of the Foamster, including all accessories, is substantially lower than that of the Foam Engine. The per gallon cost of foam with the Foamster represents a saving of about two-thirds.

FOAM USED TO COMBAT STUBBORN PLASTICS FIRE

Carbolic acid fumes generated by 150 tons of burning plastics bowled over 31 firemen last December, in a grueling 12-hour battle with flames that swept a West Chester, Pa., warehouse.

When water failed to smother the blaze, National Aer-O-Foam was used to bring the fire under control. Later, a bulldozer pushed the smoldering mass of sheets from the warehouse to the street, where firemen snuffed out the burning residue. Damage to the building was estimated at $200,000.

Send for Your Free FOAM FACTS Subscription

We'd like to send you a free subscription to FOAM FACTS. This quarterly publication is full of interesting data and helpful information on foam fire protection.

It's yours for the asking. Just mail your name and address (and the name of anyone else at your plant who should receive it) to National Foam System, Inc., West Chester, Pa.

Foam System Protects Sunken Fuel Oil Tank

National Foam engineers recently solved the problem of giving complete, always-dependable foam fire protection to a 120-foot sunken fuel oil tank. Manpower at the tank was limited to a single workman, so the equipment for liquid proportioning could require no supervision at any time.

The Aer-O-Foam system to meet this need involved the use of nine line proportioners, taking suction from a 1,000-gallon tank of Aer-O-Foam Liquid. Discharge piping was connected to a header which ran to three laterally-connected MCV Foam Chambers on the roof of the tank.

In case of fire, the city pumper takes suction from a near-by hydrant, hooks to a fire department connection outside the building, and pumps water at approximately 150 psi. Aer-O-Foam Liquid is picked up by the proportioners, and solution is piped to the foam chambers, where resultant foam is delivered to the burning surface.

This system completely satisfied the need for foolproof operation, and was approved by the city fire department.

FOAM LIQUID FIGHTS POLAR SOLVENT FIRES

Aer-O-Foam "99", newest foam product in the list of National Foam "firsts," now fills the long-felt need for a mechanical foam with universal application.

Thoroughly tested, it is designed for use on fires involving alcohols, ethers, esters and related oxygen-bearing polar solvents, as well as petroleum products. Lower installation cost, less manpower needed, and a wider range of approved devices are just a few of the advantages of the mechanical foam system. Where automatic operation is desired, it is a simple matter to adapt mechanical foam systems to meet specific plant requirements.

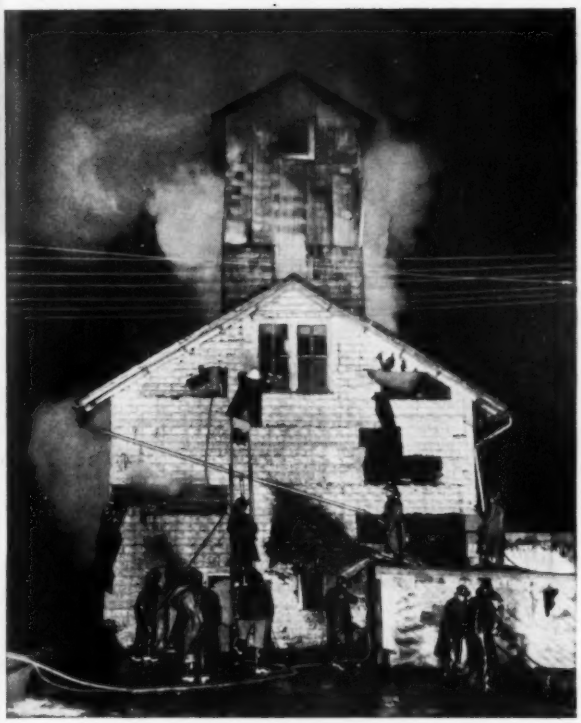
Aer-O-Foam "99" forms a tough, fire-resistant blanket of foam which will not break down nor readily disintegrate, but adheres to and insulates all types of surfaces.

DRENCH Extinguishes Huge Sawdust Pile Blaze In South Dakota Mill

Drench, a National Foam product which not only makes water wetter but also increases its depth of penetration, recently was used to extinguish a fire in five carloads of sawdust.

The shipment of Drench was made by air to a South Dakota mill owner who had discovered a spontaneous combustion fire in a huge pile of sawdust and shavings.

"We were well pleased with the results of Drench," the owner said. "The solution really penetrates sawdust, and results in a very much smaller consumption of water. We used it with a fog nozzle, and found this very satisfactory."



AN ACTION photo taken from the roof shows four lines of John Bean high-pressure fog working on the third and fourth floors of the elevator.

CONFIDENT of the fire-fighting and protection power of John Bean high-pressure fog, firemen were able to combat the blaze at close quarters inside the elevator.

JOHN BEAN HELPS MAKE ANOTHER REMARKABLE STOP

Roaring elevator fire whipped in four hours

ONE OF FOUR Bean high-pressure fog units called on to make the stop. The use of high-pressure fog helped conserve the water supply, an important factor since Springport does not have a municipal water supply.

ONE LOOK at the clouds of dense smoke billowing from the Day Elevator in Springport, Michigan, convinced Fire Chief Donald McCully he had a tough fire with the odds against him.

Springport's John Bean High-Pressure Fog Fire Fighter went into action immediately, and soon three additional John Bean fog units, from neighboring departments, were battling the stubborn blaze. In all, thirteen pieces of equipment responded to Chief McCully's call, under a mutual-aid agreement.

Making the most of every drop of the limited water available, eight lines of hard-hitting high-pressure fog were supplied by the four John Bean trucks. Protected by the fog, firemen were able to approach and smother the flames so effectively that within two hours the fire was under control. In four hours the fire was out.

Firemen who worked the lines praised both the fire-fighting efficiency and ease of handling of John Bean high-pressure fog. As with all elevator fires, the fire fighting was done under the most difficult conditions.

Find out how *your* community, too, can be protected with John Bean High-Pressure Fog Fire Fighters. Write today for information on the complete line of John Bean Fire Fighters.

John Bean Division
Dept. 126
Lansing 4, Michigan

JOHN fmc BEAN

John Bean Division
P. O. Box 145
San Jose, California

ORIGINAL HIGH-PRESSURE FOG FIRE FIGHTER

Can be mounted on most standard truck chassis

A PRODUCT OF FOOD MACHINERY AND CHEMICAL CORPORATION

Those Who Know Insist On HANNAY HOSE REELS

New Ford Fire Truck for City of East Lake, Ohio. Made by Central Fire Truck Corporation, St. Louis, Mo., and equipped with the new Hannay Hose Reels.

Check the Superior Advantages

HANNAY ELECTRIC DRIVE HOSE REELS

Water Resistant
Vapor Resistant
Explosion-Proof

- ★ Extra strong construction to withstand high pressures.
- ★ Explosion-proof, heavy duty motor protected against fog, foam, fumes and water.
- ★ Sealed push button control.
- ★ Safe rewind speed, always under control.
- ★ Quiet, positive sprocket and chain drive; no gears to shift, no clutch to engage.

The continuing and increasing approval of Hannay Hose Reels by leading manufacturers and major fire departments is sound evidence of their superiority. Progressive fire officials, of large municipal departments and volunteer companies alike, know that when the going is tough there's no time for mechanical upsets . . . and that HANNAY Hose Reels can always be depended upon to do *their* part of the job. Attention to details makes for perfection. Specifying HANNAY Hose Reels is a detail that warrants your fullest consideration.

Ask Your Supplier or Write for Full Details

. . . . LOOK FOR THIS

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REG. U.S. PAT. OFF.
HOSE REELS
CLIFFORD B. HANNAY & SON, INC.
WESTERLO, NEW YORK

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MANUFACTURERS OF MANUAL AND POWER OPERATED HOSE REELS FOR EVERY PURPOSE

A GREAT TEAM
OF FIRE-FIGHTING PUMPS
—pulling together for YOU!

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BARTON - AMERICAN
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DMA

THE PORTABLE
AUXILIARY-
BOOSTER
3XD

WRITE FOR BULLETINS:
No. 8120 (3XD Booster)
No. 8733 (DMA Pump)
No. 8330 (UA Pump)

Like all great teams, these pumps really *pull together!* For booster service, the American-Marsh 3XD Auxiliary Pump is *tops!* From pond, stream or cistern, it'll supply two 1½" hose lines or one 2½" line, depending on nozzles used. And it's better-than-ever now with increased power and reduced weight.

Working with it, you'll want the superior performance and great dependability of the Barton-American DMA Multistage Midship Pump — or the Gear-Driven UA Front-Mounted Model. Either one will give your department peak fire-fighting effectiveness — plus unique operational advantages. Make *yours* an *all-American-Marsh team!*

AMERICAN-MARSH PUMPS

BATTLE CREEK, MICH.
U. S. A.

CANADIAN APPARATUS PLANT:
American-Marsh Pumps (Canada) Ltd.
Stratford, Ontario, Canada

Tarrytown, N. Y. votes for . . .

WARD LaFRANCE

Tarrytown, N. Y. . . . located on the Hudson River . . . achieved Revolutionary War fame as the scene of the capture of John Andre, British military officer who was negotiating with Benedict Arnold for the latter's betrayal of West Point. Like so many communities, Tarrytown has chosen Ward LaFrance to provide it with modern fire-fighting equipment.

Why? Because Ward LaFrance Pumpers have proved their ability to perform under a wide range of conditions. These rugged pumpers are built with engines in 130, 150, 200 or 240 H.P. . . . deliver the weight-to-horsepower ratio so necessary for quick get-aways and hill-climbing.

Each Ward LaFrance Pumper comes equipped with Waterous split housing pump . . . surplus gallonage that far exceeds rated capacity . . . flat horizontal booster tank . . . exceptional hose capacity . . . plus other outstanding features.

WRITE FOR BULLETIN Send today for colorful, illustrated bulletin that describes Ward LaFrance apparatus. Then . . . when you're ready to add new equipment . . . you'll have all the facts on hand!

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EXPORT: Ward LaFrance International, Inc., Elmira, N.Y., U.S.A. *Cable Address:* "WARDTRUCK"

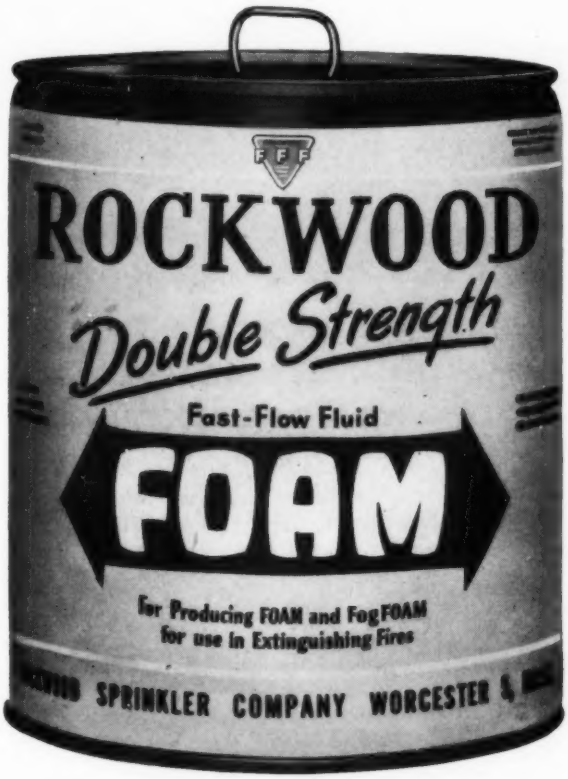
Quenches Quicker!

. . . with Less Water

that's the Short-Short Story of Rockwood Fire Fighting Aids

That's why fire-fighters like to work with Rockwood's equipment. Take for instance our new contribution to modern fire fighting, the Rockwood Double Strength FOAM Liquid which has many important advantages. Three of these are:

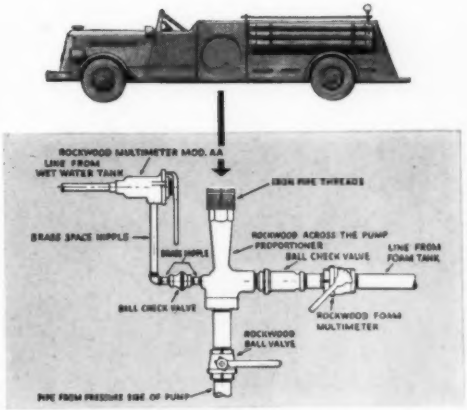
- 1. more fluid
- 2. faster spreading
- 3. flows freely at sub-zero temperatures



Rockwood's new Double Strength FOAM Liquid will put out fires in flammable liquids faster and at lower cost. Three parts of FOAM liquid mixed with 97 parts of water form an excellent foam blanket that will quickly re-seal if broken. Double Strength FOAM Liquid is more fluid, faster spreading and flows freely at sub-zero temperatures (—15° F.) It is quicker to put into action, covers burning surfaces faster, seals off combustible vapors completely and flows freely around obstructions. This foam blanket has proved its ability to extinguish large spill fires in gasoline with maximum speed and safety to firemen.

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses



Accurate Mixing Assured: Automatically feeding Double Strength Foam or Wet Liquid into hose lines, Rockwood's Model Dual "B" Around-the-Pump Proportioner is designed for use where pressure is maintained by a pump from either draft supply or booster tank. Multimeter settings admit proper amounts of wetting agent for varying nozzle discharges and solution strengths.

Special Fire Truck Proportioning Systems for FOAM Liquid and Wetting Agents

Trucks for crash-rescue fire fighting, at airports or for handling spill fires in an oil refinery require special proportioning systems for large volume FOAM discharge through several FOAM turret and hand line nozzles.

Custom engineered proportioning systems to meet these and other unusual requirements are a Rockwood specialty. If you have such hazards let us engineer a proportioning system to fill your needs.

SEND FOR THIS ILLUSTRATED CATALOG

ROCKWOOD SPRINKLER COMPANY
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Please send me Rockwood's illustrated catalog on the complete line of cost cutting, efficiency-boosting products for modern fire fighting.

Name_____

Title_____

Company_____

Street_____

City_____

Zone_____ State_____

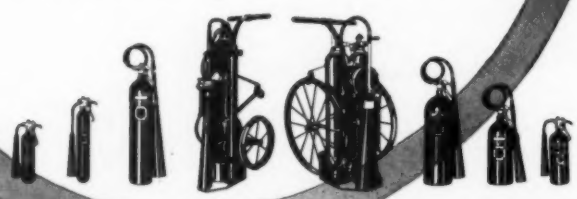
Eliminate SHOCK HAZARD!

*ALFCO ANTI-STATIK HORN Device grounds static electricity, insures safety.

Sectional view of Alfco Anti-Statik Horn

ALL ALFCO CARBON DIOXIDE FIRE EXTINGUISHERS WITH HOSE CONNECTIONS HAVE ALFCO ANTI-STATIK HORNS

All commercial Alfco Carbon Dioxide Extinguishers having hose connections are equipped with an exclusive Alfco Anti-Static Discharge Horn which grounds static electricity, eliminating the possibility of shock to the operator from a static charge generated by rapid release of gas. Smaller size units with shorter swivel type horns do not require this feature. There is a capacity size model to meet your requirements from 20 lbs. down to 2½ lbs. Wheeled Engines also available in 50, 75, and 100 lb. sizes.



* On All ALFCO Carbon Dioxide Hand Portable FIRE EXTINGUISHERS and WHEELED ENGINES EQUIPPED WITH HOSE CONNECTIONS

OUR 2nd Century of Leadership in FIRE PROTECTION

AMERICAN-LAFRANCE-FOAMITE Corporation

ELMIRA · NEW YORK · U.S.A.

ALFCO

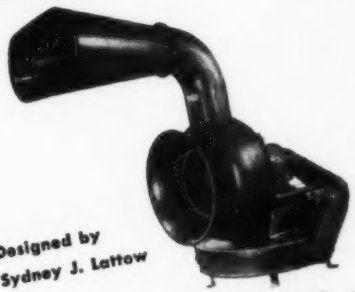
CIVIL DEFENSE'S MIGHTY TWINS

Your Life Depends on MOBIL-DIRECTO AIR RAID SIRENS

ROTATING DIRECTIONAL

NEW IN POWER ONLY

MOBIL-DIRECTO ELECTRIC AIR RAID SIREN



Designed by Sydney J. Lattow

The most powerful electric siren built — and it uses only one 10-HP famous name motor! Mobil-Directo Electric Air-Raid Siren outperformed all other sirens — tested recently in Chicago — in decibel rating and audibility when calculated on a weight, cost, and ease of installation basis. No expensive accessories or costly installations necessary.

Designed by Sydney J. Lattow

25 HP AIR-COOLED ENGINE

MOBIL-DIRECTO *Gasoline-Driven*

MOST POWERFUL SIREN ON THE MARKET

for horsepower used — outperforms other sirens costing twice as much — does the work of approximately seventy-five small, low powered devices. Expert sound engineers, U. S. Signal Corps and National Bureau of Standards give Mobil-Directo rating of 126 to 130 decibels at 100 feet. Constructed of heavy-gauge steel — withstands years of service. Light weight, mobile unit — can be mounted on trucks or strategic defense buildings in 15 minutes time. No costly wiring or towers necessary for installation. Low maintenance cost. Consistent operation guaranteed in the event of power failures, sabotage and under blackout conditions. Remote control wiring optional.

Federal Civil Defense Administration approved for matching funds. Used by Armed Forces and in numerous municipalities.

Please send me complete details on MOBIL-DIRECTO AIR RAID SIRENS

Check one: ☐ Electric Siren ☐ Gasoline Driven Siren

Have your technicians chart our area at no cost! City Map Enclosed.

Name.....

Address.....

City.....Zone.....State.....

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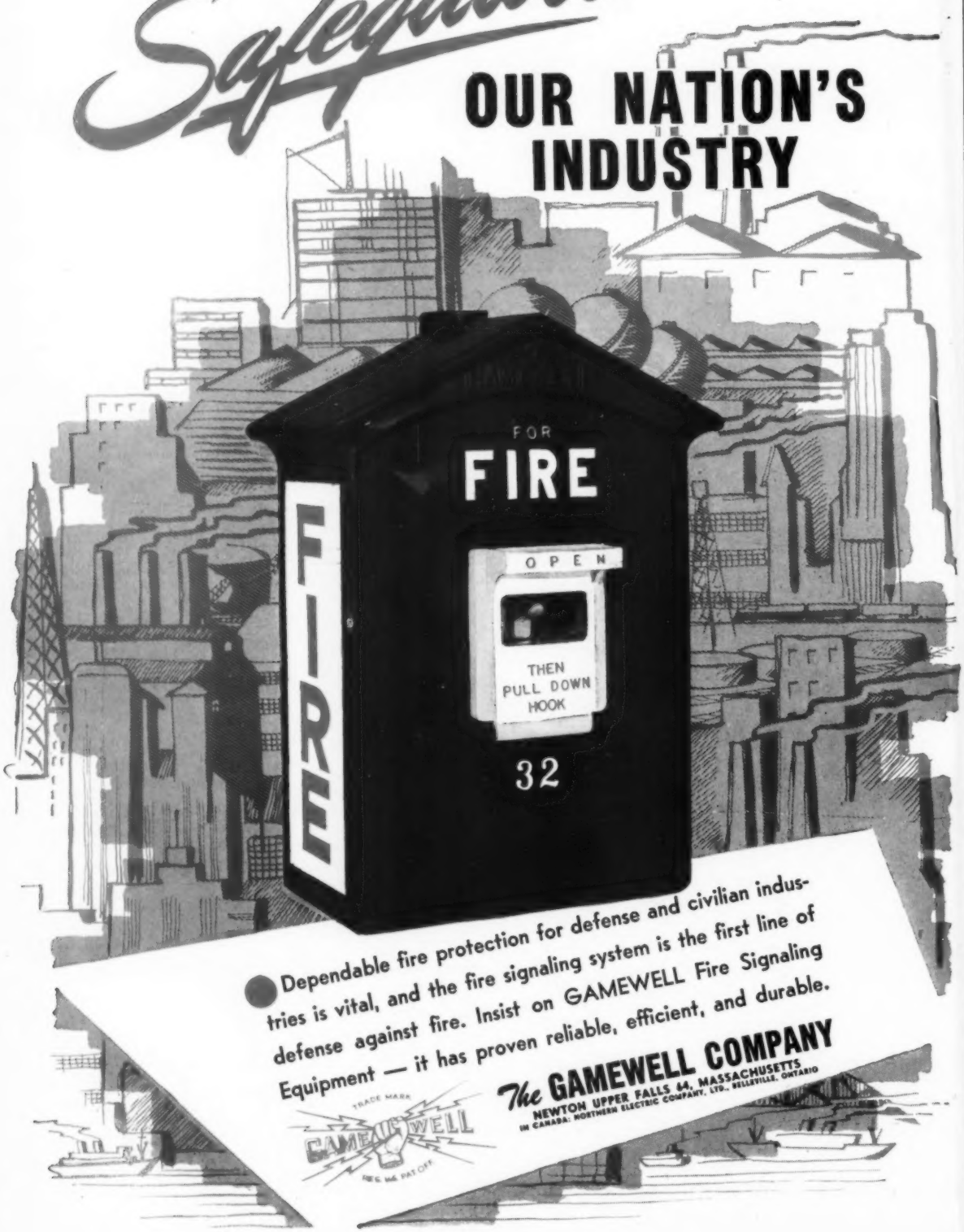

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FIRE ENGINEERING

JULY, 1952 VOL. 105, NO. 7

With the Editor

Boundary Line Bugaboos

The nation's press on June 17th gave space to a story about a tragic fire on the borderline of North Bay, Ontario, in which a father and six of his children burned to death. Basis of the account, as the press told it, was the fact that the victims perished in a flaming tar-paper shack "a few hundred yards outside the city limits" while firemen waited for permission of their mayor to go outside the city line to fight the fire. By the time official approval was received the filmsy house had been reduced to ashes.

Similar tragedies on a lesser scale have happened in this country and, like the Canadian episode, have done the fire service no good, whatever the actual facts of the incidents.

What really happened at North Bay is told in the communications from Fire Chief G. H. Thomas of that city and Fire Marshal William J. Scott of Ontario, published in the "With Our Readers" section of this issue. They merit close study.

Here is a situation that has plagued fire fighters for many years. The problem of protection of the "orphan territory" is still with us.

We are aware of the reasons given for refusal of a community to permit its fire forces to go beyond its own limits to fight a fire, or meet an emergency. We agree that, in the past, many small communities and fire districts have imposed shamefully upon their bigger and better-equipped neighbors by asking for fire protection which they could not reciprocate, and for which they would not compensate.

We appreciate the fact that the public is all-too-often unreasonably prone to expect municipal firemen to serve them in such cases, even if by responding to such outside calls for aid fire fighters may leave their own native areas to the mercy of disaster. And we agree that there must be some limit to the extent and degree of service a fire department should render outside its own bailiwick. but we find it difficult to accept the idea that before a fire department can dispatch any assistance of whatever amount to an outside emergency, the chief must first secure the "permission" or "approval" of a mayor or some other municipal official.

As we view it, if a man is capable of administering a municipal fire department, or setting up fire protection and prevention plans and facilities for his community, he is capable of deciding just what constitutes an emergency, and when and where his fire forces shall be dispatched, and how they shall operate.

The idea that a fire chief must secure permission of any other municipal authority before taking action is a fallacy. In most states of this nation the fire chief is by law responsible in every way for the administration and operation of his fire department. Certainly on the fire ground no one, not even a mayor of his community or the governor of his state, has any legal right to say to the local chief "thus far shalt thou go and no further."

Even where, as in the case of some town and village fire departments, custom, or the law, or both, have decreed that a fire chief shall first secure permission of a higher-up before responding to an out-of-town call for help and the chief does go out-of-bounds to save lives or property on his own initiative, it is doubtful if his action would not be sustained by public officials and the public.

In many parts of this country, fires on the borderline of two municipal fire departments are being fought cooperatively, by agreement. It doesn't matter if responses overlap; the first units to arrive go to work on the fire even if it is outside their actual territory. When the forces responsible for the district appear, they take over.

Where there are "orphan areas," one of three things should be done (1) local fire protection must be established, preferably by organizing a fire department; (2) fire protection can be contracted for with nearby fire services, or (3) the state or county must provide adequate protection through conservation, forestry or other services.

Fire knows no boundary lines. The head of the fire department should be the one to decide to what extent his fire force shall go out to save life and property in emergencies without waiting for permission or approval from any other municipal authority (who incidentally may be in Europe, or in the hospital, or on vacation).

Fred Thomas

Fast-Spreading Fire Damages Famed Warner Movie Studios

By PAUL C. DITZEL

THE problem of fighting fires in motion picture studio "sets" and properties is one geographically peculiar to the Southern California area of the United States.

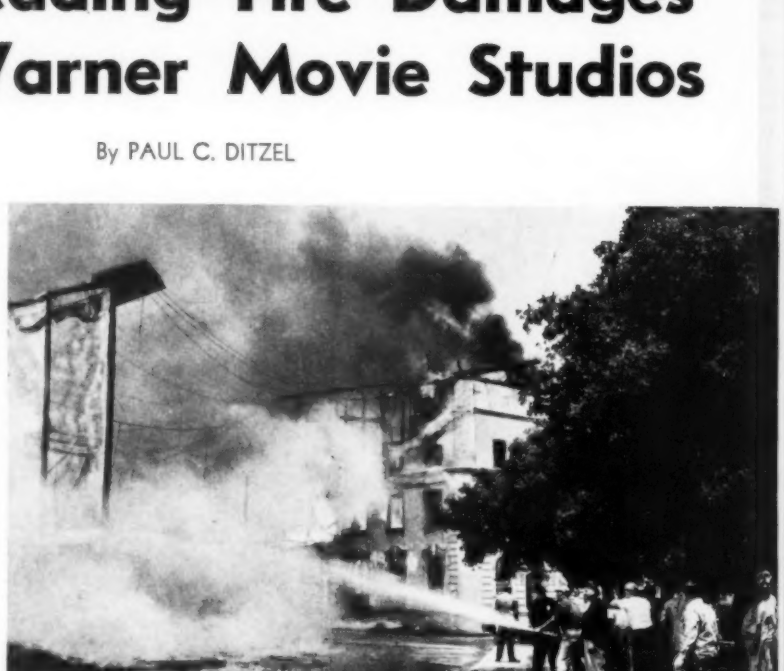
The vast motion picture lots in the Hollywood area provide a highly combustible setting for fast-spreading fires. Motion picture sets, built to simulate actual street blocks and scenes, are not required to follow building code laws. Sets are constructed and broken down and moved around the lot so frequently that no system for regulating them for fire control has so far been established.

Flimsy and highly combustible film properties are necessary for ease of handling, which results in construction of the sets of light material, usually lumber.

Studio buildings used in movie making appear from the outside to be of concrete or brick construction. In reality they are made of plaster and lumber. Inside the sets, which are actually mammoth shacks, are large open areas with frequent unprotected openings, such as windows and doors which permits rapid spread of fire.

Moreover, the inside area of make-believe buildings is frequently used to store costumes and other flammable paraphernalia which goes into the making of movies. Inside construction of the set buildings generally is of lumber extending across the sets and also allowing a ready avenue for fire.

One of the main problems in studio fires of the magnitude recently confronting Burbank, Calif., firemen is the danger of rapid spread. The problem of the area already involved is somewhat secondary inasmuch as there is little hope of saving it once it ignites. The problem is one of containment against almost unbelievable swiftness of fire spread.



Los Angeles F. D. Photo

Note the flimsy construction of the blazing studio set. From the outside of the building it would appear that construction was of stone and brick. In reality, construction was of wood lath and two by four supports with a thin coating of plaster, or stucco, over it.

Unlike conventional building construction, there are no rooms in these sets to contain or hold fire. The amount of unobstructed fire area is so large that the opportunity for a fast-spreading fire is great. Moreover, there are no fire walls to retain fire as there usually are in conventional structures.

The tremendous amount of heat generated from a studio fire, once it gets a good hold, presents a threat by radiation to other closely packed buildings in the studio lots.

Assistant Fire Chief Mack Darnaby of the Burbank, Calif., Fire Department, aptly summed up the problem by saying: "Probably no hazard in the fire service affords a greater area of exposure to the rapid spread of fire than motion picture studio lots."

Tinder-like construction of lots in Hollywood's never-never land calls for a faster sizeup of the fire and calls for more equipment in the early stages of the fire than almost any other type of blaze confronting today's fire departments.

All the forces of modern fire-fighting must be close at hand during the early stages of the movie studio fire to cut off the spread of the fire to other areas of the sprawling motion picture studios.

A quick knockdown of a motion picture lot fire, the one and only way of winning the battle at such odds against the firemen, depends upon immediate call for additional manpower and apparatus. Also needed is equipment with portable and mounted deluge sets, immediate operation of mutual aid plans and intelligent use of fire radio facilities. Speed and fire department heavy artillery go hand-in-hand at such fires.

The life hazard at motion picture studio fires is relatively low. The studio buildings have large doors and other

Los Angeles F. D. Photo

View of Sound Stage 21 as it collapsed. Notice the bubbling broken sprinkler riser at left center. Warner Brothers master film storage vault is at the extreme left of the picture. The building was fully sprinklered but firemen feared for a time that the fire might spread to it.

exits to permit handling of large and bulky film-making equipment to be moved about the lots.

Almost all the tools of modern fire fighting were brought into operation May 16, 1952, when a rapidly spreading fire was discovered in the gigantic back lot of Warner Brother's 40 acre studio at 4000 West Olive Street in Burbank. The city is only a short distance northeast of Hollywood, the film capital of the world.

The fire apparently started from an undiscovered cause near a drapery storage building, also used as a movie set near Sound Stage 21, reportedly Hollywood's largest sound stage. Before the fire was brought under control, the drapery storage building and Sound Stage 21 were destroyed and three other outside movie sets were heavily damaged. The drapery storage building was located next to the south end of Stage 21.

Sound Stage 21 was 300 feet long and 120 feet wide. There was a 65-foot clearance from the rafters to the ground. The stage was the only fully sprinklered building of those involved. The others were partly sprinklered, or had no sprinklers. The building had a wood truss roof. Along the ceiling was a 2-inch thick layer of rock wool, which was used for sound-proofing. It lay as a blanket against the wood roof.

There were two 8-inch sprinkler risers going up the outside of the building. One of the peculiarities of the fire, according to Burbank Fire Department officials, was that the sprinklers did not work properly. There apparently was some water going through the sprinkler system but not enough to control the fire when it communicated to Sound Stage 21.

The American District Telegraph Company registered a closed gate valve at 12:45 p.m., which was twelve minutes after the first alarm of fire. Fire officials said the sprinkler system would have contained the fire to Stage 21 and checked it in the fire's incipient stages if the system had been functioning properly.

The sprinkler piping inside the ruins was being pulled apart to determine whether some obstruction in the sprinkler system might have retarded its operation.

Studio 21 actually was a roofed-over tank, and housed what is known in Hollywood as a roofed ocean. The entire floor area of Studio 21 could be filled with water to a depth of 30 inches (to nine feet in the center section). All of Warner Brother's sea scenes were filmed in this stage which was only 15 years old. Its walls were of reinforced concrete.

The stage was built in 1937 for the movie, "Seahawk," which starred Errol Flynn. Humphrey Bogart "killed" a whole boat crew, including Edward G. Robinson in the movie, "Key Largo," in this studio. Many dry surface scenes also were shot in Sound Stage 21.

The film, "The Iron Mistress" was being shot in the studio only two days before the fire. Just before the fire was discovered, Actress Kathryn Grayson and Actor Gordon Macrae had finished rehearsals prior to shooting "The Desert Song."

During the fire, the south end of Stage 21 collapsed and ruptured one of the eight-inch risers, the breakage of which caused a serious drop in water pressure. The broken sprinkler was shut off by operating a post indicator valve. The rapid bubbling of water from the broken sprinkler indicated the line feeding the sprinkler was charged and operating.

The blaze reportedly started along the studio's New York Street, where the set housing draperies was located. The 15-mile-per-hour breeze, blowing almost directly north from the San Fernando Valley, ignited other New York Street sets constructed of wooden false fronts. The breeze swept the fire into Brownstone Street, used for tenement house scenes and from there spread to sets used for foreign street scenes.

The fire entered Sound Stage 21 through ventilator openings at the southwest corner of the building. Flame traveled upwards to the Sound Stage ceiling and then spread horizontally across the 65-foot-high roof. Only high pressure deluge equipment could reach the flames.

During the intense fire, explosions punctured the roar of the flames. The explosions apparently came from air compressors which powered fans, wind machines and other movie-making equipment.

The fire was fought on a warm May afternoon. Fortunately the breeze was blowing the fire away from the main part of the congested studio, else firemen say a greater area would have been involved before the flames were checked. The fire razed the equivalent of two city blocks.

The loss was believed covered by at least 61 different insurance companies. Estimates of damage ranged from $175,000 to $1,250,000.

The fire alarm office in Burbank's City Hall Building received an American District Telegraph Company signal from Box 34, Stage 3, at Warner Brothers at 12:32 p.m. All boxes on the studio property are ADT operated. Burbank dispatchers sent Engine 2, a 750-gallon American LaFrance pumper, Hose 5, a Mack hose wagon with no pump and Rescue 4.

Notification of the fire department probably was delayed some minutes inasmuch as the studio employees were on their lunch hour. The fire had gained a good headway before discovery.

Proof of this seems to come from the fact that Engine 2, on pulling out of their quarters one mile away from the fire scene, reported over the Burbank fire and police radio station, KMA-345, that they were on the air and responding. Immediately thereafter they radioed that they could see lots of fire and black smoke looming up from the direction of Warner Brothers. Engine 2 requested all possible available aid while still responding.

Also on his lunch hour was Assistant Chief Darnaby. He overheard Engine 2's radio report over the receiver in his car and immediately headed for Warner brothers.

From the first, then, the use of radio not only expedited the call for additional men and equipment but gave a top officer of the Burbank Fire Department

Some idea of the tremendous heat generated by the fire is shown from this fully involved studio prop. Intense flame of rapidly spreading fire drives these studio workmen back. Note the construction of the studio set. What appears to be fireproof brick construction is actually a highly flammable material. Note amount of open inside area of this set gives fire plenty of opportunity to spread.

a good indication of the headstart the fire already had.

The fire alarm office dispatched an additional engine and hose wagon in compliance with Engine 2's request. Additional ADT boxes were received as well as numerous telephone calls reporting the fire. A total of six boxes were pulled for the fire.

It was immediately obvious that more help than already was in Burbank would be needed. The mutual aid program with nearby Glendale was put into effect. Glendale dispatched two engines to Burbank. One of the engines patrolled the area around the fire and helped extinguish fires started on wood rooftops of residences surrounding Warner Brothers' Studios. The other engine from Glendale was located in Burbank's Station 1. There were no other outbreaks of fire during the Warners fire.

Additional help was requested from the Los Angeles County Fire Department and from the Los Angeles City Fire Department. Under the exisiting mutual aid setup, the larger fire departments, such as the city and county fire departments in the Los Angeles area, unhesitatingly give whatever aid is asked, providing the help is requested by a top officer of the fire department in whose jurisdiction there is a fire requiring outside help.

Two engines and a truck were sent by Los Angeles City Fire Department and the Los Angeles County Fire Department dispatched a 750 gallon pumper from its station in Universal City.

Off-Shift Recalled

The Burbank Fire Alarm Office also began recalling the off-duty shift. The Burbank department has 70 men, 26 of whom were on duty when the fire started. Dispatchers were able to reach 21 off duty firemen who went to the scene. Studio workmen also manned hose lines and helped firemen battle the towering flames.

Burbank Fire Chief William Taylor responded as soon as he heard of the fire and took control of operations. Other Burbank chiefs at the fire were Battalion Chiefs Fred Olchvary and Wayne Morgan.

Warner Brothers has a fire department of its own, including a 1000-gallon American LaFrance pumper. Spotted around the studio lot are hose reels and fire hydrants. Several thousand feet of hose from the studio's fire department had been laid and was in operation by the time the Burbank department arrived. The fire, however, was far beyond possible control by studio fire equipment and manpower.

Two hydrants nearest the point where the fire is believed to have started were too hot to approach to make a hookup. Hydrants further away had to be used. Firemen had all the water they wanted. Water came from three 8-inch mains tied together in a loop and two 6-inch mains. Another 12-inch main came into the studio from Rowland Street and another 12-inch came in from Olive Street, on which side the studio faced. Static pressure on hydrants on the studio lot is about 180 pounds.

High pressure equipment was quickly brought into play. Burbank's Hose 2 and Hose 4 operated mounted deluge sets, and a portable deluge set belonging to the Los Angeles City Fire Department also was put in action.

The Burbank department laid 50 feet of 1-inch hose; 1,250 feet of 1½-inch hose and 5,200 feet of 2½ inch hose. Burbank also raised a total of 103 feet of ladders. Greatest length of pumping time was done by Burbank's Engine 2, with 9 hours. Burbank's Engine 3 pumped 7½ hours.

Several miles away at the time was Battalion Chief Lynn W. Nelson of the Los Angeles City Fire Department's 14th battalion. Chief Nelson was out in his district and traveling between two of his fire stations when he noticed a tremendous loomup.

Using the radio in his car, he asked his fire board at Van Nuys Engine 39 if they had received a call for a fire in that area. Van Nuys radioed back, "No." Chief Nelson then drove toward the fire and upon his arrival at Warner Brothers found the studio properties heavily involved.

Chief Nelson contacted Assistant Chief Darnaby and asked if he needed Los Angeles City Fire Department assistance. Chief Darnaby asked for aid and Chief Nelson radioed Van Nuys a request for two engines and a truck. Normally a request for assistance received by the Los Angeles City Fire Department from the many communities bordering the city calls for a first assignment dispatch of one engine and a chief officer.

Van Nuys contacted the Central Alarm Office at Westlake and Westlake obtained immediate approval from Assistant Chief Frank Winkler at Fire Department Headquarters. Van Nuys then dispatched Engine 60, a 1250-gallon Peter Pirsch triple combination pumper, and Truck 60, an 85-foot Seagrave aerial. Westlake dispatched Engine 76, also a 1250-gallon Peter Pirsch pumper.

While Los Angeles City Fire Department equipment was responding, Chief Nelson sized up the fire and decided the key point to cut off the rapidly spreading fire was at three large sets facing on the studio's Brownstone Street, immediately to the west of the main fire now in Sound Stage 21.

Fronts of the three plaster, stucco and wood buildings already had ignited from radiation. Chief Nelson said one of the buildings was exceptionally large and if fire was not soon cut off in it there would be a second major fire in addition to the inferno in Sound Stage 21.

Engine 76 was the nearest Los Angeles City Fire Department to the Warner Brothers Studio and Chief Nelson gave it directions by three-way radio in his car. While Engine 76 was en route, it received the radioed directions from Chief Nelson to enter Warner's main gate and come down the Main Street of the studios. Then Engine 76 was to lay a 2½-inch line into the largest building, the one in the center of the three ignited by radiation.

Engine 76 arrived and took their line through tremendous heat on Brownstone Street, paralleling the main fire, and worked their stream onto the fire as it extended into the building. Engine 76 laid from the hydrant. Burbank previously had laid a line from the same hydrant into a small manifold wagon. Chief Nelson ordered Engine 76 to lay a second line into Burbank's manifold wagon. Up until then, pressure at the manifold had been inadequate to properly operate from it. This problem was corrected when Engine 76 began pumping from the hydrant directly into the manifold.

Chief Nelson also took command of several lines being operated by studio employees and ordered these lines inside the three Brownstone Street buildings. Chief Nelson directed a total of seven 2½-inch lines which were used inside the three buildings.

Upon Truck 60's arrival, Chief Nelson ordered the truck's portable deluge set placed in position inside the door at the south end of the flaming Sound Stage 21. It was hoped that fire could be cut off from this point. But the fire had gained too much headway and there was too much area involved for only

(*Continued on page* 543)

Aerial view of the large area involved at the Warner Brothers Studio fire. Note the sound stages in the lower left foreground. The mammoth Sound Stage 21 was similar in construction to these smaller stages. This air shot gives some idea of the tightly packed studio area and the problem of protecting exposures.

Fire Service Ladders and Their Use—Part XXVI

Ladder Evolutions: Extending Ladder Reach

By ROI B. WOOLLEY

Editor's Note: The author gratefully acknowledges the cooperation of the Committee on Firemen's Training, Fire Department Instructors Conference, Richard E. Vernor, Chairman, for much of the material upon which this Chapter is based. The photographs shown in the Figures were taken by H. F. Rothery of the District of Columbia Fire Department.

FIREMEN are confronted with many emergencies in the course of their operations of saving life and property. No situation, however, is more critical, or more disturbing to fire fighters themselves, than to face the urgent need of rescue of persons trapped in a burning building and to be caught without ladders of sufficient length.

FIG. 1

Under such conditions, time may be of the essence. It may be impossible to await the arrival of additional apparatus carrying the desired ladder equipment. Or there may not be time to splice together two or more available ladders in order to construct a ladder that will afford the desired reach. Of course, if nets are available, lives may be saved even in such emergencies. However, too many fire departments lack this equipment and furthermore, conditions may be such that it is essential to enter the premises and make search for missing persons and for other fire department operations. Therefore, any means that will help the fire fighter cope with this situation may be of great value, and should be known in advance to the firemen.

Two methods of extending the reach of ladders are described herein. The first (Figs. I, II and III), shows the application of two straight wall or ground ladders, whereby the shorter of the two is used to extend the reach of the longer. The second (Figs. IV and V) shows the shorter straight ladder mounted on the long wall ladder. Some instructors maintain that this method of securing additional reach can also be followed where the shorter ladder is mounted on an extension ladder.

Nearly every fire department has at least one straight ladder of 18 to 30 ft. length, and one shorter ladder, 12 to 16 ft. The first method preferably calls for a crew of four men. As will be seen from the illustrations, if the longer of the straight ladders is of such size (28 ft. or longer) that two men are required to raise it against the building (Fig. I), at least two men will be required inside the building, as pictured. Four men inside, would be better but the number will depend upon circumstances.

The first step is to bring the longer of the straight ladders to the building and to raise it in the normal manner, as shown in Fig. I. It will be noted that two of the crew have gone to the second floor. If other men are available, and smoke conditions permit, additional men can be placed at third floor window. The ladder is raised opposite the window bay but slightly to the right. (Figs. I and II).

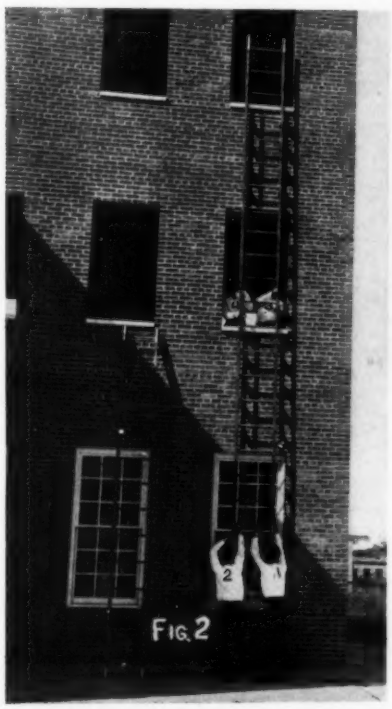


FIG. 2

The shorter ladder to be used in this operation is erected against the building as shown in Fig. II.

As the longer wall ladder is raised, the men in the window grasp it and assist the heel men in raising it. The crew in the window take on the weight of the ladder to raise it to the desired height after the heel men are no longer able to help elevate it. This is where two extra men in the third story window can facilitate the operation.

FIG. 3

With ladder elevated to the desired height, the two heel, or butt men place the shorter wall ladder in position, as shown in Fig. III. This ladder is heeled under a rung of the longer ladder to provide the necessary support. The butt of the shorter ladder, which takes most of the weight of the other, is firmly heeled by the two men on the ground. The men in the window, who are shown in this evolution standing on the sills, keep a firm hold on the longer ladder. If men are placed at the third floor, they follow the example of the pair on the floor below them.

In this position, the two ladders may be secured by a rope tool or ladder straps, although if the men maintain

FIG. 4

firm hold on the longer ladder, it should not easily get away from them. Care should be taken to see that the ladder is not raised either in the dead center of the window bay or too far to either side. The point in keeping it slightly toward one side of the window is to facilitate leaving or entering the window from the ladder (especially where an unconscious person may have to be removed).

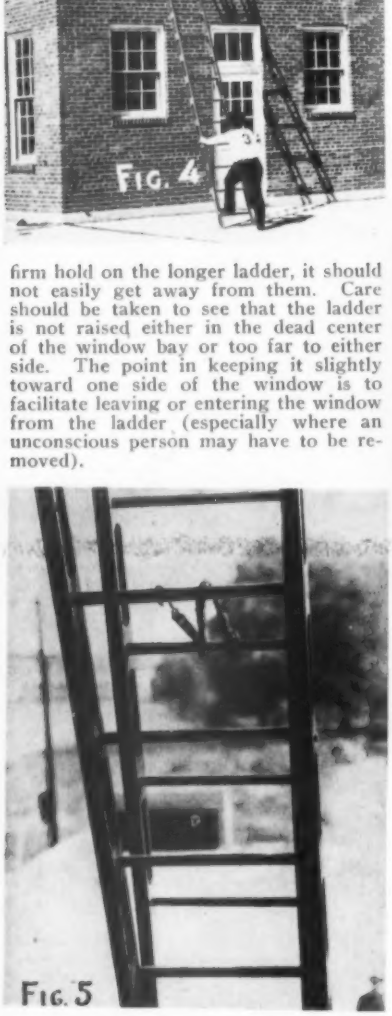


FIG. 5

The second method of extending ladder reach calls for mounting the shorter ladder upon the longer, rather than supporting the latter, as in the first evolution.

Figures IV and V picture this operation. The longer ladder is raised against the wall, as shown in Fig. IV. If two men are available to butt the longer ladder, it is advisable to do so, while two men take up the shorter ladder and place it in position, with heel on the rung of the longer ladder.

The short ladder, once in position with its tip in the window, as shown, is secured by means of a rope tool or ladder strap or rope (Fig. V). The heel man, or men, remain to butt the ladder while the other members of the crew climb the ladder.

Once the first man has reached the window to which the shorter ladder is placed, he should preferably secure his ladder to the window ledge.

Pompier or scaling ladders may be used from ground ladders, or aerial ladders, to provide additional reach in emergencies. Also, the hook roof ladder may be used from other ladders, as pictured in Fig. VI.

This evolution, using the roof ladder in lieu of a pompier, is not recommended except in cases of extreme emergency. Where done, the tip of the longer wall ladder is placed to one side of the window below that to which entry is to be made and the short hook ladder is fastened as securely as the hooks will

FIG. 6

permit into the upper window, so that the ladderman can easily step from the longer ladder onto the shorter, which is steadied by the man inside the lower window. If sufficient crew are available, another man can help steady the hook ladder from the tip of the long ground ladder. In this position he is also available to aid in the removal of any rescued person, or to pass up hose lines.

Where conditions are such that multiple rescues are necessary, and a portable extension ladder but not an aerial ladder is available, the extension ladder may be made to deliver maximum service as shown in the "hotel raise" previously described.

Reading Host to Eastern Association

The Reading, Pa., Fire Department, reputed to be the largest and oldest volunteer fire department in the nation, aided and abetted by the good folk of the entire area, went all out in welcoming the 25th Annual Conference of the Eastern Association of Fire Chiefs, June 1 to 3, inclusive. Nearly 400 fire chiefs and their families and guests enjoyed a conference in which entertainment and education were perfectly balanced.

President Herbert A. Friede, Superintendent of Communications, District of Columbia, opened the conference Monday, June 2. Addresses of welcome were delivered by Charles M. Stoner, Reading, Chairman of the Conference Committee who also introduced Mayor James B. Bamford, Jerome J. Staab, Director of Public Safety, and Fire Chief Edward C. Dell, all of Reading. Former Fire Chief Harry Howard also spoke.

Response to the welcoming messages was delivered by Chief Roi B. Woolley, Assistant Editor, FIRE ENGINEERING, after which came the memorial services to the departed members, and routine business of the Conference.

The Technical Sessions got underway in the afternoon with the opening address by Kyle P. Laughlin, Director, Fire Service Division, Federal Civil Defense Administration whose subject was "What Training Courses for Civil Defense Fire Fighters." Director Laughlin urged trained inspections to rid cities of hazards and, in so doing, he said, the dangers of fire from an enemy attack would be greatly minimized.

Charles H. Howe Jr., Fire Marshal of Montgomery County, Md., told the interesting story of "A County That Made Good on a Fire Prevention Program." He was followed by Fire Chief Charles G. Burnett of Newark, N. J., who gave the "story behind the story" of the recent Warren propane blast and fire in his city. "The nearest thing to an atomic attack the fire service has thus far seen," is the way the chief expressed it.

Former secretary Charles E. Clark, Wayne, Pa., told the delegates about the Pennsylvania State fire prevention training program, following which there was a Round Table discussion engaged in by a panel of fire chiefs, with Chief Roi Woolley acting as chairman. The topics weighed pro and con covered a wide range, and there was considerable audience participation.

The evening saw an impressive exhibition of the apparatus and men of the 14 Reading Fire Companies lined up on Penn Square, between Fourth and Fifth streets.

Tuesday's sessions opened with Chief Joseph Giammatteo, first vice-president, presiding. The first paper by Robert Byrus, Director Fire Service Extension, University of Maryland, College Park, Md., was titled "Bringing Training to the Fireman" and explained in detail the progress in statewide training made by the Maryland State Fire School.

T. C. George, Assistant Chief Inspector, Bureau of Explosives, New York City, discussed "the Hazards Fire Departments Face as a Result of Transportation," pointing out the tremendous increase in highway traffic and corresponding greater movement of flammable and explosive cargoes.

Inside facts and figures about the Brighton, New York, natural gas disaster were given in a report by D. H. Platt, Chief, Albany Section, Accident Health Division, U. S. Department of Interior, Bureau of Mines, Albany, N. Y. He paid compliments to officers and men of the Brighton Fire Department, and to the many Monroe County aiding forces which responded on the muutal aid calls, for holding the fire and life losses to the minimum.

Chief Ellis Wagner, of York, Pa.,

(*Continued on page* 518)

Industrial Fire Fighting

Part 6 of a Series

By W. E. ROSSNAGEL
Fire Protection Engineer

VII. Fire Hydrants

Just a few words about hydrants. As we all know, the water mains are laid deep in the ground, below the frost line, so that the water will not freeze. Likewise, the valve in the hydrant is below the frost line. But if a hydrant is used, the fire extinguished, and the hydrant shut off, water will remain in the hydrant body above the valve, where it may freeze. To prevent this from happening, a 3/8" drain hole is provided in the bottom of the hydrant so the water can drain out into the ground. A valve controls this drain.

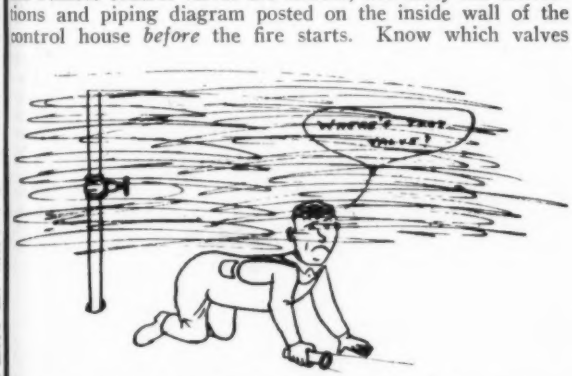
When opening a hydrant look for a raised arrow and the word "OPEN" cast on the bonnet near the stem. Industrial hydrants usually open by turning the spindle counterclockwise like a valve. Municipal hydrants, on the other hand, usually operate by turning the wrench in the other direction, for it seems that firemen are stronger in the right arm.

The design of hydrants varies with manufacturer, but in general the first six or seven turns of the hydrant wrench (which at this time turns easily) merely close the drain valve. Then with considerable effort the next twelve to fourteen turns open the main hydrant valve against the pressure. Always open the hydrant wide. When closing a hydrant turn the wrench until it jams, but then back it off a half-turn. Then, when the next man has occasion to open the hydrant, he won't find the spindle jammed. If he turns it the right way, he will have no difficulty. If he turns it the wrong way, it will go a half-turn and then stop, and he will then know he is turning it in the wrong direction.

VIII. Built-in Fire Equipment

Study the fixed or built-in fire protection system in your plant. Know the location of the standpipe outlets with hose racks or reels, and also the location of the plant fire hydrants and the control valves.

Large oil tanks may be equipped with fixed foam systems to blanket the oil surface in event of fire. Find out where the remote control valves are located, and study the instructions and piping diagram posted on the inside wall of the control house *before* the fire starts. Know which valves



control each tank, keeping in mind that usually there are two solution lines leading to each tank and the valves on *both* lines must be opened. If two or more protected tanks are afire, extinguish one fire before putting foam into the other tank.

If there are fixed CO_2 systems of the high pressure type installed at spray booths, dip tanks and other hazardous locations, learn how to operate them in event of fire. Usually it is only necessary to break a glass on a control box, then pull the handle inside the box. If the CO_2 system floods a room, don't enter that room after a fire is extinguished until all the CO_2 has been cleared out.

Low pressure CO_2 systems are supplied by one large storage tank refrigerated to 0° F. instead of by a battery of high pressure cylinders, but the controls are practically the same.

At oil cooled transformers of large sizes small fog nozzles are piped up at strategic points so as to completely envelope the apparatus in water fog in event of fire. The system may have a manually or automatically controlled deluge valve. If manual, learn how and where to start it operating.

Many electric generators are equipped with spray rings built inside the end-bells of the stator for extinguishing fires in the windings resulting from insulation failures. Of course, the generator must be taken "off the line" and de-energized before attempting to extinguish the fire. The piping extends from the standpipe system to the spray ring, with the pipe discontinued for a distance of about a foot. On the supply pipe is a gate valve and hose coupling. At the generator side of the gap is a hose coupling and a short piece of 2½" cotton rubber-lined hose, left disconnected from the supply end. If the valve should leak, or if anyone should tamper with it, the water will drip out, and not accidently find its way into the generator. As an added precaution, the valve and hose unit is enclosed in a locked box with a breakable glass panel for reaching the lock in emergency.

The fixed Dry Chemical system operates similarly to the wheeled Dry Chemical extinguisher. That is, if there is a portable hose, uncoil it, then open both valves at the top of the unit, and finally operate the hose nozzle. It should be unnecessary to adjust the pressure regulator, for this is set at the factory. Do *not* open the valve at the bottom of the unit. This is for bleeding off gas and clearing the powder from the hose and nozzle *after* the fire is out.

IX. Automatic Sprinkler Systems

Properly designed and installed sprinkler systems require very little attention. It is important, however, that stored material shall not be piled so high as to be less than 18" below the level of the sprinkler heads. Also, if new partitions are erected, it may be necessary to install additional heads on one side or the other of the obstruction in order to give complete coverage.

Most sprinkler heads are designed to open at about 165° F., but where used in foundries, or over drying ovens, or in other hot locations, heads having higher ratings are used.

The control valves for the sprinkler system should never be closed for repairs or alterations without first notifying the insurance company, and service should be restored at the earliest possible moment. During the shutdown, a firewatcher should be on continuous duty.

Daily checkups should be made of the sprinkler control valves to make sure that they are all open. Indoor valves are open when the screw stem of the valve projects beyond the handwheel. Out-of-doors post indicator valves are open when the sign in the glass window reads "open."

Plant maintenance men should periodically check the

sprinkler system. The Alarm Check Valves and the Dry Pipe Valves are complicated, and anyone examining them is apt to get confused. Although they may not look alike, these valves are pretty well standardized.

Figure 33 shows a single-line diagram of the Alarm Check Valve, the purpose of which is to sound an audible alarm when the sprinkler system is in operation. To test this valve, note the water pressure on the two gauges. The gauge which is connected higher up on the alarm valve normally reads slightly higher. Close the electric switch and listen for the bell. Then open *wide* the *2"* flow test valve. If the water supply to the sprinkler system is adequate, the water passing through the test valve should make a loud roar, and the water pressure, as indicated on the gauges, should drop only slightly. Also, the water-motor-operated gong should sound.

Where sprinklers are installed in unheated buildings, the water would freeze and burst the piping. For such locations, a Dry Pipe Valve is installed instead of the alarm valve. Fig. 34 shows a diagram of such an installation. Inside the valve chamber are a large and a small valve disc, connected by a linkage. Compressed air is supplied to the sprinkler system above the valve, and this low pressure, acting on the large disc, holds the smaller disc closed against the higher water pressure. When a sprinkler head opens, the air is released, the valve opens, and the water rushes through to the sprinkler piping. The electric and the water-motor gongs sound.

At the periodic inspection and test, check the air and water pressures, and compare them with the figures in the sketch. Also, open the *2"* flow test valve, as mentioned above. Once a year, momentarily open the air test valve and the priming water test valve. Air should blow out of the former, and water should discharge from the latter when there is the proper amount of sealing water in the valve. Do not trip the Dry Pipe Valve, except under proper authorization, for re-setting it is a major operation.

X. Special Fire Hazards

For fighting *smoldering* Class "A" fires in materials such as baled paper, baled rags, bunker coal, spent iron oxide-shavings mixtures in gas plants, etc., it is necessary that the extinguishing agent penetrate to the seat of the fire. Water is the best material for extinguishing Class "A" fires, and a detergent or wetting agent mixed with the water in about a 1% solution will reduce the surface tension of the water (make it thinner) so that it will penetrate more readily.

Another method of extinguishing *smoldering* coal bunker fires has proven very effective. Eight or ten holes, about two feet deep, are dug in the surface of the coal pile surrounding the hot spot, and an additional hole directly above it. In each hole is placed a 10" cube of dry ice (solid CO_2), and they are then covered over with coal. In about 12 to 16 hours the hot spot will have cooled off, indicating that the fire is out.

But if the fire in the coal bunker advances to the stage where glowing coal or flames are observed at the top of the coal, then entirely different technique must be used. Or rather, there are certain things that definitely must *not* be done:

(1) Never empty the burning coal from the bunker via the downtake to a pulverizer mill, for in the mill is a coal dust-air mixture which may explode violently if a live coal should enter the mill. It is permissible, however, to draw burning coal into a stoker-fired boiler.

(2) Never use water in any form on a glowing or blazing fire in a coal bunker, particularly if the space above the bunker is not well ventilated, for water in contact with red hot coal will produce "water gas," a type of manufactured illuminating gas. This gas is high in toxic carbon monoxide, and is highly explosive.

(3) Never discharge coal into a bunker in which there is glowing or flaming coal, even though quite a distance away. The up-draft of hot gas and air above the fire draws fresh air into the fire from all directions, and some of the cloud of dust from the dropping coal may be carried into contact with the open flame and result in a violent dust explosion.

For serious bunker fires, there is no better remedy than disconnecting the coal downtakes to the boilers and allowing the hot coal to spill out onto the floor where it can be readily

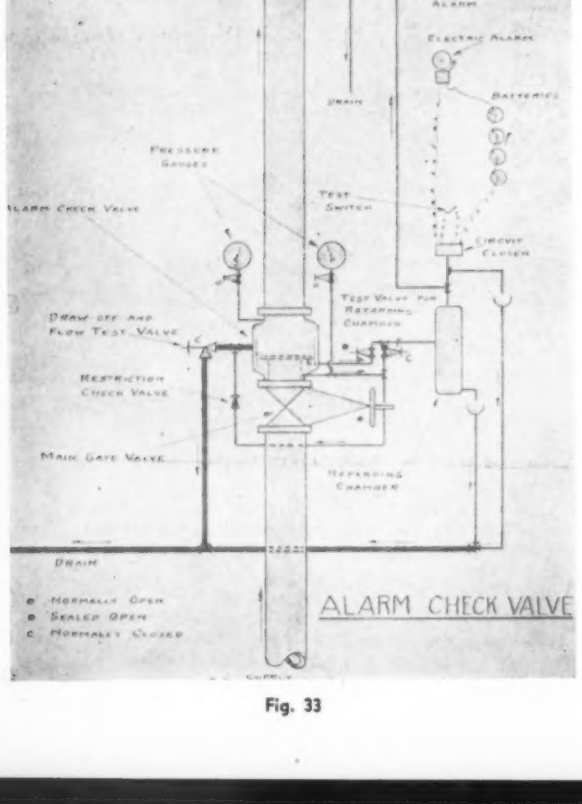


Fig. 33

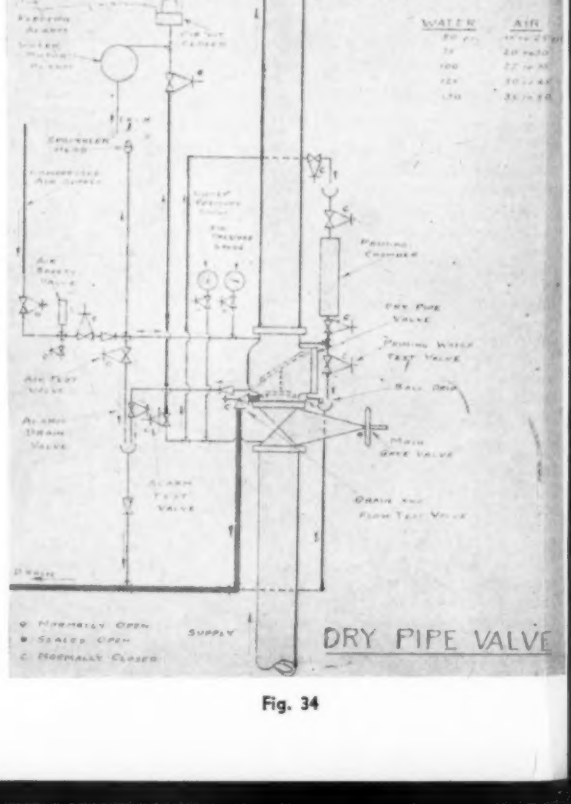


Fig. 34

cooled by a small hose stream, then transported outside the building.

The ducts in the boiler house for conveying mixtures of pulverized coal and air often become hot in spots, indicating smoldering fire in the coal dust lodged on ledges or pockets. The dust concentration is too rich for flame combustion or an explosion, but if the duct is opened to permit the use of ordinary extinguishers, air may be admitted in such quantity as to produce a flammable mixture, and an explosion may result. So—don't open up the duct under any condition, and don't run the blower without feeding the usual quantity of coal. If connections have been provided, inject wet steam into the duct, and use water fog on the outside to cool the metal duct walls.

A hazard which is becoming more common is magnesium lathe chips, borings or grinding dust. Fires in magnesium, zirconium and some other not-so-common metals do not come under Class "A," Class "B" or Class "C" fires, but must be extinguished by special technique. In solid form, magnesium can be cut with an acetylene torch without igniting it, but fine lathe chips will be readily ignited by a dull cutting tool. Chips exposed to moisture, or those coated with cutting oil may ignite spontaneously. Keep to a minimum all piles of chips under the machines. Never allow more than a few handfuls of chips to accumulate. Remove them periodically, and place them in a covered steel drum located out-of-doors.

To extinguish a fire in a pile of magnesium chips, use a shovelful or two of *dry* sand or soapstone (talc) to cover the fire and keep it from spreading (except downward if on a wood floor) and in perhaps a half-hour or so, the fire will be extinguished. If on a wood floor, shovel the chips and sand or talc into a *perfectly dry* metal container, and take it outside where the fire can burn itself out without harm. Water applied to burning magnesium will intensify the fire. CO_2 and foam will also make it burn better. Dry Chemical does not have much effect one way or the other, except that the jet may blow the chips around and spread the fire. Carbon tetrachloride will cause a violent explosion. So—don't use any ordinary extinguisher on magnesium fires.

There are new extinguishing agents for magnesium fires which can be used as a fire preventive as well. They actually extinguish the fire, not merely covering and confining it. These have been described in the section under "extinguishers."

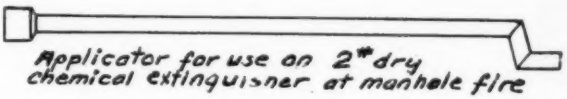


Fig. 35

For fighting fires in transformer manholes located in city streets, a special applicator (Fig. 35), if available, may be attached to the nozzle of certain dry chemical extinguishers to more effectively deliver the powder through the grating onto the fire. If the applicator is not available, the nozzle itself should be pointed downward between the bars of the grating at the end of the manhole *opposite* that from which the smoke and flame is rising. Then the powder will be drawn into the fire with the draft of fresh air entering the manhole to replace the hot gases. If the metal of the transformer is heated excessively, it may be necessary to resort to the use of the high velocity fog nozzle on a fire hose. Even a solid stream may be directed through the grating without danger of electric shock to the fire fighter, for the water will be thus broken up into a spray.

There have been fires in oil tanks, followed by explosions or implosions, in which the foam mixing chambers on the tanks were rendered inoperative. As an emergency measure, in such an incident, if a fill pipe or drain pipe can be disconnected and an adaptor and a check valve attached, then it will be possible to connect to it a fire hose from a chemical foam generator. Foam can then be delivered through the service piping. If the drain pipe is used, the foam, being buoyant, will rise to the surface of the oil, taking with it some of the cool oil from the bottom of the tank. The fire may be extinguished by the smothering effect of the foam, or by thus cooling the surface of the liquid to below its flash point. There is one limitation, however. The foam generator has an open ejector to draw in the foam powder, so if the depth of the oil in the tank is too great, the back-out pressure will cause the water to back up and float the powder of the foam generator hopper.

Chapter XI on Fire Fighting Technique will appear in the August issue.

Book Shelf

Attacking and Extinguishing Interior Fires. By Lloyd Layman. Published by the National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass. 134 pages and cover. Price $3.50.

Not every experienced fire chief will agree fully with the principles and practices of fire extinguishment laid down by Chief Layman in his book: Nor do we believe Chief Layman set down his thoughts so much to be accepted as he did to direct the thinking of members of the fire service.

Chief Layman has long been a leader in espousing the theory and practice of fire extinguishment by water fog and wet water. His willingness to "Stick out his neck" however, really manifests itself when he conceived the idea that using fog and air currents, fire in confined spaces or "interiors" can be controlled with the minimum of exertion and water. These principles he developed during his stay with the Coast Guard, at which time he carried out a series of experiments on the old Liberty Ship, Gaspar de Portola, at Ft. McHenry and later on the Phobus, in San Franciso.

Whether you agree with Chief Layman's contentions or not, his book is one that should be in the library of every fire chief. It is provocative of thought, and in addition contains much valuable information with which there can be no argument.

The six Chapters deal with (1) the Fundamentals Governing Interior Fires (combusion of fire, heat propagation, transfer, absorption, etc.); (2) Water (vaporization, conversion to steam, consumption of B.T.U.'s, etc.); (3) The Indirect Method of Attack (the story of the Coast Guard tests, and application of Chief Layman's principles to domestic fire control); (4) Equipment (types of fog nozzles, etc.); (5) Case Histories (here Chief Layman reports in detail on the application of his principles to Class A domestic fires); and (6) Practicable Suggestions (training and education of fire fighters in the new techniques).

Plans Completed for "Stover Special" to I.A.F.C. Meeting

The New York Central System in cooperation with Frank F. Stover of the Gamewell Company have completed plans for special sleeping cars enroute to the I.A.F.C. Convention and return. These special sleepers will consist of uppers, lowers, roomettes, bedrooms, compartments and drawing rooms.

The special cars will leave Chicago via the New York Central System from Central Station, Michigan Avenue and Roosevelt Road, at 9:35 A. M., Central Standard Time, August 23rd, arriving Boston, Mass., at 9:10 A. M. Eastern Standard Time, August 24th, 1952. On the return the cars will leave Boston via New York Central System at 2:20 P. M. Eastern Standard Time, arriving Chicago, La Salle Street Station 11:30 A. M. Central Standard Time.

For the convenience of members in Michigan, the train will stop at Niles, Kalamazoo, Battle Creek, Jackson and Detroit in both directions.

The round trip unrestricted railroad fare between Chicago and Boston is $88.46 plus $13.27 Federal Tax. The round trip coach fare is $60.93 plus $9.14 Federal Tax. Pullman fares between Chicago and Boston, one way, are: Upper berth, $7.55 plus $1.13 Federal Tax; Lower berth, $9.95 plus $1.49 Federal Tax; Roomette, $13.90 plus $2.09 Federal Tax; Bedroom (for 1), $18.90 plus $2.84 Federal Tax; Bedroom (for 2), $21.90 plus $3.29 Federal Tax; Compartment (for 1), 22.35 plus $3.35 Federal Tax; Compartment (for 2), $27.85 plus $4.18 Federal Tax; Drawing room, $37.80 plus $5.67 Federal Tax.

The above fares are from Chicago, Ill. Fares from other points can be secured from local ticket agents.

Reservations in the special cars can be secured by contacting Harold W. Carlson, 602 LaSalle Street Station, Chicago, Ill.

NEW HAVEN FIRE DEPARTMENT STAGES DRAMATIC FIRE TESTS

Vast Turnout Sees Newest Methods of Fire Extinguishment Demonstrated

A Staff Report

THE New Haven Fire Department, Chief Paul P. Heinz, broke still another record on Saturday, May 24th, when it staged "Chiefs Day and New Haven Field Day" as the concluding exercise of the week-long Eleventh Annual Connecticut Fire College.

Although the College concluded sessions Friday, many of the students remained in attendance to participate in the spectacular exercises of Saturday, for which a total of over 1,500 fire fighters and guests registered.

This was the Third Annual Field Day of the New Haven Fire Department (that of 1951 being postponed because of civil defense activities) and, as with its predecessors, the occasion was marked by dramatic demonstrations of fire fighting, and fire alarm and warning operations and equipment. A number of manufacturers of apparatus and appliances participated in the ceremonies, several having their innings at a special Friday night gathering which was devoted to automatic fire protection systems. Companies on this program were: Fire Eye Corporation, Cambridge, Mass.; J. H. Scharff Co., Orange, N. J.; Fenwal of Ashland, Mass., and Mohawk Electric Co., of East Orange, N. J. Latest motion pictures of fire subjects also were shown to the large Friday audience.

Oil Fire Extinguished by Agitation

Highlights of the day's doings were the demonstrations of the extinguishment of oil fires by agitation; the application of small extinguishers, using dry chemical, on large Class B fires, and high pressure fog; the problems presented by magnesium fires; the use of large capacity fog heads on ladder trucks to knock out wide-area oil fires, and the showings of the newest air raid warning devices, and fire and rescue apparatus.

To demonstrate the extinguishment of oil fires by air-injection and turbulence, a special 20 ft. concrete tank was erected, and this filled with light oil. A simple piping system provided air unoil fires by air-injection and turbulance, mobile air compressor. The oil was primed with gasoline and ignited and given a sufficient pre-burn to develop a roaring hot fire. The air was then turned into the tank through several apertures in the piping placed along the bottom of the tank and almost immediately the resulting turbulence of the contents extinguished most of the fire. Small pockets of flame which persisted in the tank's corners, removed from the turbulence, were easily extinguished by a dash of water-fog (these minor holdover fires would not be present in the customary round fuel oil tanks.) This exhibit was under the supervision of J. L. Risinger, of the Socony-Vacuum Oil Company of New York.

Another impressive event was the extinguishment of a hot oil fire surrounding a 10,000 gallon capacity oil tank by a crew of so-called amateurs using small dry chemical extinguishers. This crew was composed of railroad and steel safety engineers who previously had received only a short briefing on their "act." They were directed by officers of the New Haven Fire Department, Deputy Chief Tom Collins and Battalion Chief Flannery (stalwarts of the New Haven Training Grounds), and representatives of the Safety First Products Corp.

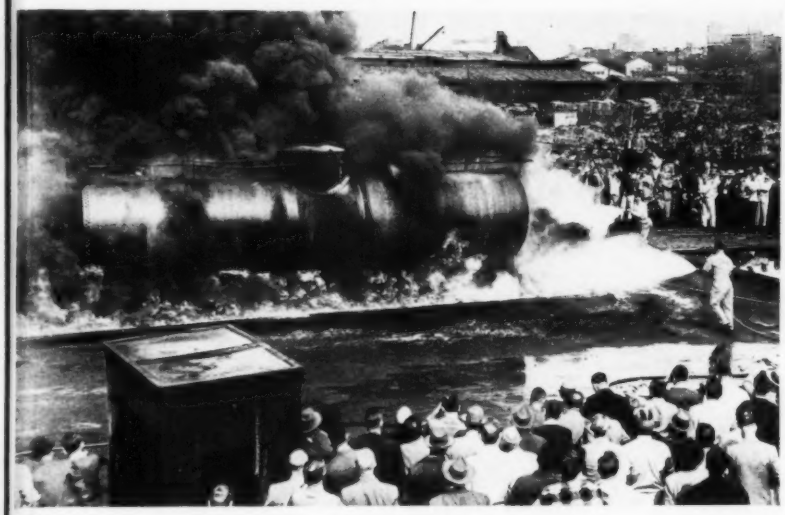
Start of the demonstration of extinguishing tank fire with portable dry chemical extinguishers.

Oil and solvents under pressure were sprayed over the huge railroad tanker mounted on concrete abutments and this solvent was ignited, together with a shallow tank of flammable liquids under the big container. The roaring fire drove back the onlookers and raised doubts that the scratch-crew of fire fighters would ever be able to approach, let alone control, the blaze with portable dry chemical extinguishers.

Nevertheless, on Chief Collins's command, the five firemen waded in, equipped only with 25 and 30-lb. extinguishers and let fly, three on each side of the tank. Six seconds later, the white clad figures emerged from the white chemical cloud and the fire was under control. Two seconds later it was completely out. The "crew" which got a big hand, were Edward L. Speck, Jones & Laughlin Steel Corp., Pittsburgh; Merle F. Steel, Jones & Laughlin, Aliquippa, Pa.; Carl R. Dietrich, Jones & Laughlin, Cleveland; Bernard P. Francy, Westinghouse Electric Corp., Pittsburgh; and Roy Wager, New York Central Railroad.

This Field Day is said to be the first in which high pressure fog eqiupment was tried out by the New Haven fire fighters. The trials, using John Bean

Oil tank fire comes under control shortly after compressed air is supplied to agitate oil.



High pressure fog streams being applied to tank fire.

equipment, were rugged, for the type of equipment, the major effort being the extinguishment of a searing fire around the 10,000 gallon oil tank, using two H.P. hand lines. This was accomplished by Chiefs Collins and Flannery in approximately 35 seconds—a real feat considering it was the first attempt of these men to use H.P. fog on such an extensive fire.

The Connecticut State Labor Department, directed by Commissioner John J. Eagan, staged a dramatic demonstration of the hazards of magnesium, particularly in shaving form, and of the burning propensities of certain plastic materials and motion picture film.

Another innovation was the demonstration of the newest in ladder trucks, the Maxim - Magirus 100 foot metal aerial, exhibited by the Maxim Motor Co. of Middleboro, Mass.

For the first time, also, firemen were shown the latest fog-foam cellar pipe, an innovation of the Rockwood Sprinkler Co., and the new Chemical Carrier, just completed by the New Haven Fire Department.

Saturday afternoon's program featured extinguishment of a number of fires of different types in structures by crews of Connecticut Drill Masters, aided by New Haven F.D. pumpers and other equipment. These operations evidenced the many advantages of respiratory protective equipment, water fog, wet water and fog foam.

Drill Tower Fire Staged

Again, the New Haven fire fighters staged one of its dramatic drill tower fires in which gasoline was ignited on the top floor of the 6-story concrete structure and snuffed out by fog-foam a 500 G. P. M. Rockwood Fog Nozzle mounted on the tip of an 85 ft. Seagrave aerial ladder in a matter of seconds.

Shown to the registrants, also, were the latest in proportioners for wet water and fog-foam, by the Aquadyne and the Rockwood Sprinkler Companies.

The "loudest" event was the ear-shattering exhibition of the Federal Electric Company's latest "Thunderbolt" air raid siren. This revolving, powered, warning device was heard over almost all of New Haven.

As usual, too, the New Haven Fire Department not only paraded its newest apparatus, but demonstrated the Chemical Carrier and other units. The climax came with the ignition of all the oil tanks, as well as quantities of oil spilled on the Training Ground to merge into a mass "conflagration," and the extinguishment of the resulting "major" blaze by means of large capacity fog heads mounted on four of the department's aerial ladders. This awesome fire was darkened in little over two minutes.

New York State Holds Busy Conference

The 46th Annual Meeting of the New York State Association of Fire Chiefs, held June 4-7 in Binghamton, N. Y., at the Hotel Arlington, with over 200 chiefs and their families and guests in attendance, maintained a busy schedule of business and entertainment.

Thursday, June 5th, President Irving Merrick, of Poughkeepsie opened the sessions, high point of which was the panel discussion on "The Fireman's Place in Civil Defense." Participants were Lt. Gen. C. R. Huebner, State Civil Defense Director; Hon. Milton Alpert, State Civil Defense; Lt. Frank Sarocco, New York Fire Department; Roswell L. Pooler, New York State Division of Safety, and Chief B. Richter Townsend, Chief, Bureau of Fire, New York State.

Gen. Huebner told the delegates, "One of the toughest problems you are going to have is to condemn people to die when fire areas are abandoned in bomb-blasted cities." He urged increased training in large scale fire defense, stressing the importance of well organized mutual aid.

Chief Townsend introduced the speakers and said that "overall planning for mutual aid is proof enough fire knows no boundary." Lieutenant Sarocco told about the New York Fire Department's place in civil defense. Col. Bothwell explained the State's plan for atom bomb tests this year. Edward Drayton, of the State Public Works Department, spoke on the methods designed to help clear roadways for fire fighters. Roswell Pooler explained the functions of the State division of Safety as related to civil defense.

The afternoon was given over to discussions of various State developments, including the "State Labor Department Code, as it Applies to Fire Houses," led by Hon. George S. Raymond, Department of Labor; the "Fire Chiefs Institute and its Future Possibilities," led by Dr. Leonard C. Silvern, Consultant in Training; "Cooperation of the Conservation Department with the Fire Departments of the State," led by Mr. Kinne Williams, Conservation Department; and "Chemical, Electrical and Mechanical Fire Setting Devices," by James R. Barrett, Chief, Bureau of Police, Division of Safety.

Friday morning was devoted almost entirely to a discussion of the State's new "Multiple Residence Law and Its Application and Effect." A large number of the delegates participated in this session, which was led by Chief Townsend. An interesting address on the "Adoption of a Standard Thread for the Province of Ontario" was delivered by

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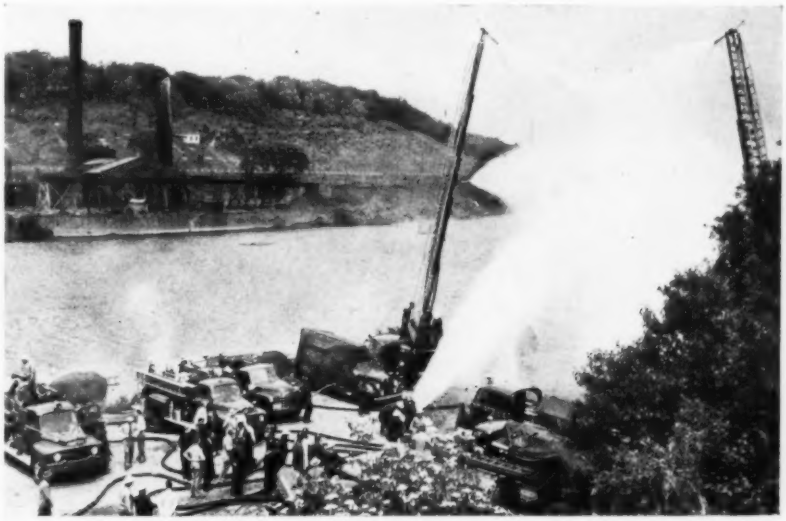

Demonstration of high capacity fog nozzles at conference of New York State Association of Fire Chiefs.

NEW ENGLAND CHIEFS' CONFERENCE AGAIN BREAKS PREVIOUS RECORDS

Registration Nears 700; Exhibits Surpass Previous Displays; Round Tables Feature Four-Day Program.

THERE may be larger, busier conventions of the nation's fire fighters than that of the New England Association of Fire Chiefs; there may be more beautiful places to hold such gatherings than Wentworth-by-the-Sea, N. H., but you will have a hard time convincing those stalwart New Englander fire fighters of the fact.

For years, the Association has picked Wentworth, and the last week in June, for its annual conferences, and for succeeding years the records of past meetings have been shattered. The 30th Anniversary Conference, June 23-26 inclusive, was no exception. In attendance —nearly 700 delegates, their families and guests; in education and entertainment and for getting things done, this year's conclave set a new high, notwithstanding the fact that the impending International and Dominion Association meetings made it impossible for many chiefs to get to Wentworth.

It was a conference that got things done. Action, in the form of Resolutions unanimously adopted, followed conclusion of important sessions dealing with fire control and prevention. As usual, the Association is making itself heard in its fight for better fire protection and prevention, and to raise the standards of the fire service.

The conference, too, attested the popularity of the "round table" and "panel" programs, and audience-participation business and technical sessions. It is believed to be the first New England conference, in which round tables and symposiums were successfully held at night.

Notwithstanding the fact that the Conference did not begin until Monday, June 23rd, about 200 delegates were on hand Sunday, the 22nd to witness the association motion pictures at the Hotel Wentworth. This is one of the few groups which chronicles in colored movies, the year-by-year get-togethers.

On Monday, President Chief Joseph E. Scanlon of Lynn, Mass., formally opened the Conference. Rev. John P. Fitzsimmons, Association Chaplain of Belmont, Mass., delivered the invocation, after which addresses of welcome were given by Mayor Theodore R. Butler, Portsmouth, N. H. (Wentworth is within that city's area); City Manager Edward C. Peterson, also of Portsmouth; Chief Wesley J. Robinson, Louden, N. H., President, New Hampshire Fire Chiefs' Club and Aubrey G. Robinson, N. H. State Fire Marshal.

Response to the addresses of welcome was given by Chief Alfred H. Koltonski of Rutland, Vt.

Memorial services, which followed, were impressive, the memorial address being given by Very Rev. Msgr. Henry J. O'Connell, Chaplain, Boston Fire Department. The Chapel Quartette sang appropriate selections, after which the names of the departed members were read off. The Benediction was given by Rev. Michael F. Collins, Dorchester, Mass., Association Chaplain.

Following an afternoon devoted to registration and group meetings, the technical and educational sessions were launched with a Round Table discussion of which Chief Roi B. Woolley, assistant editorial director, FIRE ENGINEERING and technical advisor of the Association, presided. Panel participants were: Percy C. Charnock, Boston, manager, New England Fire Insurance Rating Association; Chief Stuart M. Potter, Greenwich, Ct.; Chief William C. McElroy, Watertown, Mass., and Chief Charles H. Green, Concord, N. H. Numerous delegates also participated in the discussions of three major and several miscellaneous topics.

The subjects most throughly aired were: "Doubling in Brass"; "Fire Apparatus on Highways," and "What is Being Done About Fire Fighters' Training in Your State."

With the experience of at least one New England City in mind, that of Stamford, Conn., where firemen are forced to double with police, and having before them recent costly fires in the Province of Quebec, where most communities endeavor to merge duties of firemen and policemen, the delegates, by resolution unanimously condemned the practice.

Members also took a firm stand against indiscriminate participation in firemen's and other parades, particularly where paraders may leave their own communities wholly or partially unprotected against fire. Opposition to the overloading of apparatus, and to use of sub-standard fire equipment also was voiced. A strong Resolution on this subject was later adopted.

Through state vice-presidents and others, the progress made in training of fire fighters, for the most part volunteers, in the Region was detailed. Training is progressing, but there is still room for improvement, it was believed.

Following the Round Table, Samuel J. Pope, Federal Regional Fire Protection Engineer, FCDA, spoke on "Fire Service and Civil Defense as Viewed From the Federal Regional Level." Chief Pope, formerly head of the Boston Fire Department, reviewed the steps being taken to give the fire service its rightfully important place in Civil Defense. He was followed by Charles S. Morgan, assistant general manager, National Fire Protection Association, whose message on "Current Developments in Fire Waste Control" was well received.

A Round Table scheduled for Tuesday morning was postponed because the Chairman, Eric G. Jacobson, State Forester, R. I., and William H. Messick Jr., N. H. State Forester, were called suddenly out of town.

David I. Driscoll, Asst. Motor Apparatus Engineer, Boston Fire Department led off the afternoon sessions, with his factual paper on "Upkeep and Care of Apparatus." His message, though based on the experiences of New England's largest fire department, was filled with ideas of value to the volunteers.

George L. Swan, Assistant Chief Engineer, National Board of Fire Underwriters, reviewed the progress made in the development of fog fire fighting

Photo Courtesy of Andy Palmer

Officers of the N. E. A. F. C.

Left to right front row: Chief Henri Fortier, First Vice President; Chief Anthony J. Molloy, President; Chief Joseph Scanlon, immediate Past President; Former Chief John W. O'Hearn, Secretary-Treasurer, and Chief George Graham, Second Vice-President. In the back row are Chief Francis J. Dagon, Director from Connecticut; Chief A. J. Cote, Director from Rhode Island; Chief Clarence Green, Director from New Hampshire; Chief William Dooling, Sergeant-at-Arms; Roi B. Woolley; Chief Alfred Koltonski, Director from Vermont; Chief Thomas Slaman, Director from Massachusetts, and Chief Oliver T. Sanborn, Director from Maine.

Photo Courtesy of Andy Palmer

General Round Table Panel

Left to right are Chief Clarence Green, Concord, N. H.; Chief Stuart Potter, Greenwich, Conn.; Percy Charnock, Boston, Mass.; Chief William McElroy, Watertown, Mass., and Chief Roi B. Woolley, FIRE ENGINEERING, Chairman.

equipment, and application of water fog and wet water in controlling fires. Tracing the history of this important improvement, he paid tribute to men like Lloyd Layman, Hugh McNair, Henry Chase and others. He described the fog tests held in Miami, and the plans to attempt to determine the characteristics of the different types and kinds of nozzles presently on the market, which it is hoped will result from the tests to be held this month in Elmira, N. Y.

The concluding address of the day was delivered by Chief Rudolph H. Swanson, President, International Association of Fire Chiefs, who amused and enlightened the delegates with his description of European fire forces, and his recent visit abroad.

High point of the afternoon's program was an off-the-cuff address by B. Richter Townsend, Chief, Bureau of Fire, N. Y. State Division of Safety, captioned "Mass Mutual Aid Movements in Peace and War." New York has conducted more mass mutual aid tests than any other state in the nation, but Chief Townsend said this is only a start. The fire service must give more throught to the emergency that confronts them. Fire chiefs must accept greater responsibility and revise their planning. Go back home and reconstruct your strategy for large scale fire defense, Chief Townsend urged the chiefs, particularly those of target areas.

"The Introduction of Natural Gas for General Use in New England" was the topic covered by A. W. Johnston, Engineer of Distribution, Consolidated Gas Co., Boston. Mr. Johnston dwelt more on the source and distribution of natural gas and its use than on the hazards affecting the fire service and steps to be taken to meet them.

William Baumann, Commissioner of Public Safety, Vermont, discussed the "Juvenile Arsonist," punctuating his enlightening paper with pertinent case histories from throughout his State.

James J. Tattersall, Director, First Aid and Water Safety Service, American Red Cross, Eastern Area, Alexandria, Va., detailed the "New Method of Artificial Respiration," with help from the delegates.

Wednesday morning was devoted entirely to a Round Table discussion led by Kenneth H. Erskine, Assistant Regional Manager, The Liverpool & London & Globe Insurance Co. Ltd. The subject was "Things You Ought to Know." Rather than repeat what has been said so often about fire prevention, the topic was developed along three specific lines. Harold M. Eastabrook, State Agent, Aetna Ins. Co., speaking on "Fire Prevention Education," told about activities in schools. It was agreed that the chiefs attempt to have the school authorities in their communities adopt a formal program, utilizing the material provided by the National Educational Association.

Carl E. Hurst, general agent, Phoenix Insurance Co., of Connecticut, who spoke on "Fire Prevention Activities" urged supplementing the educational program with a carefully planned program of speakers, pictures, and other activities during Fire Prevention Week. David Vigue, special agent, Phoenix of London Assurance Co., Ltd., under the topic "Town Inspections," told about the inspection program instituted in New England by various State Fire Prevention Associations founded by the insurance field. At least two annual inspections are made, he said, without obligation, by experienced adjusters, who inspect every building (except dwellings) and render a report to the fire chief, who can follow through.

Fred Westervelt in charge of public relations, General Adjustment Bureau, addressed himself to the subject of "Public Relations in Losses" and endeavored to clarify many of the misconceptions existing in the minds of chiefs as to what fire companies can and should do.

John I. Lusk, supervisor, public service occupations, Massachusetts Dept. of Education, spoke on "Fire Prevention Education in the Schools" from the educator's point of view. He emphasized the Massachusetts school program and urged fire chiefs to adopt it.

An open question period which followed, developed many pertinent viewpoints on fire prevention and led to questions which may be discussed next year by the group, which was invited to again participate in the program.

Delegates devoted Wednesday afternoon to viewing the 41 manufacturers' and distributors' exhibits, which overflowed the Exhibit Hall, and to witnessing demonstrations of aerial ladders, escape devices, wet water, short wave, two and three-way radio, fire alarm detection systems and other developments. As before, numerous prizes were awarded delegates for attendance at the Exhibit Hall.

N. E. Division, I. A. F. C., Meets

A meeting of the delegates of the New England Division of the International Association of Fire Chiefs was held Wednesday, with Chief Henry Thomas, President, in the chair. Reports were received on the unification of fire fighting equipment standards with the N.B.F.U. N.F.P.A. and I.A.F.C., and of the program for the forthcoming I.A.F.C. Conference, scheduled for Boston, Aug. 25-28 next. Chief Thomas said all exhibits were signed up and the educational and entertainment programs, shortly to be announced, were outstanding.

Plans are completed to continue to increase the International's N. E. Division membership, and to further cooperate with the New England Association of Fire Chiefs. The officers elected for the coming year are: Chiefs Walter R. Messer, Keene, N. H., President, and Director to the Association; Harold Nickerson, Brunswick, Me., first vice president; Albert W. Kimball, Hingham, Mass., second vice-president. State vice-presidents are: Chiefs Allen Payson, Camden, Me.; Carlton H. Nott, Hanover, N. H.; John E. Keefe, Bellows Falls, Vt.; Thos. F. Gorman, Quincy, Mass.; A. J. Cote, Woonsocket, R. I. and Wm. T. Shaw, New Britain, Conn.

Photo Courtesy of Andy Palmer

Insurance Round Table Panel. Front row (left to right), John E. Shennett, Kenneth H. Erskine, Harold Estabrook, David L. Vigue and Carl E. Hurst. Back row: Fred W. Westervelt and T. Walter Keaney.

Members of a fire company at New Haven, Conn., were ordered to cool a crowd of rioting Yale students on May 13 and the above photo shows how quickly the crowd dispersed as a stream of water from a two-and-one-half line of hose went into action.

Chief Lorton C. Waldon was elected Delegate-at-Large.

N. E. A. F. C. Business Sessions

During the concluding business sessions of Thursday three Resolutions were adopted (1) decrying efforts to merge the duties of firemen and policemen; (2) counciling against participation in parades, etc., unless adequate protective forces are provided on an equivalent basis to compensate for those indulging in the out-of-town activities, and (3) urging caution in purchase of, and overloading of, sub-standard apparatus and equipment, and the adoption of a sound fire apparatus replacement program in all fire departments.

Registration at the Conference totalled 670 of which 235 were Active; 155 Associate; 43 male and 237 female guests.

In number of members (present membership 1,240) as well as financial standing, the Association has shown consistent gain, it was disclosed.

The following slate will direct the Association during the next twelve months: President, Chief Anthony J. Malloy, Nashua, N. H.; first vice-president, Chief Henri E. Fortier, Manville, R. I.; second vice-president, Chief George Graham, Bristol, Conn.; secretary-treasurer John W. O'Hearn, Board of Directors and State vice-presidents: Maine: Chief Oliver T. Sanborn, Portland; New Hampshire, Chief Clarence Green, Concord; Vermont, Chief Alfred Koltonski, Rutland; Massachusetts, Chief Thomas Slamon, Wellsley; Rhode Island, Chief A. J. Cote, Woonsocket; Connecticut, Chief Frank Dagon, E. Hartford. Retiring president Chief Joseph Scanlon was elected "Roving Director."

Re-appointed were: Chief William J. Dooling, Hood Rubber Co., Sergeant-at-Arms; Chief Roi B. Woolley, FIRE ENGINEERING, Technical Consultant; Andrew P. Palmer, Woonsocket, Press Representative; Lieut. Edward J. Carroll, Brookline, Mass., Official Photographer, and Chaplains Rev. Michael F. Collins, Marblehead, Mass. and Rev. John P. Fitzsimmons, Belmont, Mass.

It was unanimously voted to return to the Wentworth in 1953.

Fire Stream Cools Ardor of Yale Men

A Spring gambol, that took on the proportions of a riot, by close to 1,000 Yale students blocked the downtown streets of New Haven, Conn., on May 13 until judicious use of fire hose cooled the students and sent them back to the campus well drenched.

The spark that touched off the disturbance was a fight between the drivers of two ice cream trucks, vying for a good selling spot near the Yale campus. The two-and-one-half stream of water which firemen directed on the crowd was impartial in its spraying, and among those who came in for a dousing, besides students, were Police Chief Howard O. Young, and Police Commissioner Daniel J. Adley.

The riot has its serious aspects, too. Four students were arrested, two sent to the Yale infirmary with concussions which resulted from blows on the head, and six others were treated for less serious injuries. A. Whitney Griswold, president of Yale University, issued a statement apologizing to the city. "I am deeply distressed," he said, "at the public nuisance for which the undergraduates were responsible."

One member of the fire company sent to the scene didn't think it was funny. "We're getting paid to put out fires, but orders are orders," he explained.

—TOM MAGNER.

Schoolboy Fire Patrol

Eighteen years ago a rookie firemen joined the ranks of the Huntington Fire Department. Today, several years later, this man, John W. Gallagher, is Deputy Fire Chief and co-organizer of an outstanding continuous fire prevention program in Huntington, W. Va., the "Schoolboy Fire Patrol" which is sponsored by the Huntington Junior Chamber of Commerce and also known as the "Jaycees."

This project began some eighteen years ago as an idea in the mind of this young fireman, and at regular intervals was presented to various civic clubs of Huntington for sponsorship, but there were no takers. The Jaycees undertook to get the patrol started during the war years but failed, after the chairman and several others of the organization were called to the service. Since that time the idea had been discussed without visible results.

In the spring of 1951, the Jaycees elected President, L. Carl Cornell, and one of his first acts was to call Fire Chief Floyd Crouse, Deputy Chief John W. Gallagher and a committee of Jaycees together at a luncheon meeting to organize the Schoolboy Fire Patrol.

Following several discussion meetings during the summer of '51, Fred Bu-

Members of the Schoolboy Fire Patrol, Huntington, W. Va., receive instruction in the dangers of defective electric cords.

chanan, who had become interested in the Fire Patrol, was appointed chairman to head the committee. Soon thereafter, the blueprint for the program was ready for adoption by the Jaycee Board of Directors and the public and parochial school systems.

Gallagher, Buchanan and Cornell secured permission of Olin C. Nutter, Superintendent of Cabell County Schools to present the Schoolboy Fire Patrol to the schools. The committee immediately sent letters to the principals of every grade school in the city, outlining the program and calling a mass meeting of all interested persons in order to coordinate the program to the needs of the schools and selecting patrolmen in each school. Three hundred boys, interested parents, teachers and principals attended the meeting at the City Hall and discussed various phases of organization and operation of the Schoolboy Fire Patrol.

The number of participating schools exceeded all expectations. Of the thirty-two schools in the city, none has failed to take part in the program. Since training in fire prevention was an important part of the project, it became necessary to divide the city into seven training districts with at least three schools taking part in each. Classes range in size from forty to more than eighty and are conducted by John W. Gallagher and members of the Fire Department. Jaycees are always on hand to lend assistance in many ways. Badges were furnished to all patrolmen by the Jaycees and arrangements are now being made for a day of entertainment for the 500 members of the Huntington Schoolboy Fire Patrol.

Organization of the patrol called for two lieutenants in each classroom and one captain for each school. All were selected by classroom instructors and school principals. After these selections were made, registration cards were filled out and signed by parents. A training schedule was prepared, and sent to all schools, outlining the meeting dates and the meeting places. School captains were responsible for the safe conduct of the patrol boys from one school to another.

Huntington newspapers, radio and TV stations generously aided and supported the Schoolboy Fire Patrol. Several feature picture stories have appeared in local newspapers and special radio and TV time has been devoted to the enterprise which has had the acclaim of parents, teachers and the general public.

To accomplish the objective of teaching year-round fire prevention, a complete training schedule was put into operation. Each member of the patrol receives one training period each month. This means seven sessions per month for training personnel in addition to regular duties at the department. Many things are taught to make youngsters cognizant of fire hazards wherever they are found. The December class dealt entirely with dangers pertinent to the Christmas season, particularly relating to home lighting and decoration. Other sessions related to a special home inspection sheet, fire drills in the schools, fire hazards at home and school and many other topics.

A special meeting was scheduled for all Fire Patrol Captains at Huntington's Central Fire Station February 16. This session gave the youngsters a first-hand opportunity to view the routine of a fireman. A tour of the station was arranged to inspect the sleeping quarters, fire fighting clothing, equipment of many kinds, first aid facilities and alarm signals, and a ride on the huge ladder truck was provided as a climax to the day's activities.

The long-range program of the patrol is two-fold. First, it is hoped that interest in fire prevention at home and school will prevent some fires or reduce the number of deaths from fire. Second, the fire department anticipates interest in future years on the part of some of these patrol boys in becoming firemen. A well informed Schoolboy Fire Patrol should produce a more qualified applicant fo this responsible position. The asumption of responsibilities and leadership training has become an obvious development of the patrol program.

After six months of successful operation of the Schoolboy Fire Patrol, the Jaycees and the Huntington Fire Department are thoroughly convinced it is probably the most outstanding project ever sponsored in Huntington. Steps are now being taken to present this project to the Jaycees of the state of West Virginia and the State Firemen's Association at their respective conventions this summer for joint sponsorship in other cities.

WARREN D. SANFORD.*

*Since this article was written, *Fire Engineering* has received word of the death of Mr. Sanford.

Chemical carrier recently added to New Haven Fire Department.

New Haven Adds Chemical Carrier

The New Haven, Conn., Fire Department, Chief Paul P. Heinz, which has pioneered a number or original types of fire apparatus has added still another unusual unit. This is called the "Chemical Carrier," and it is designed primarily for fighting large-scale flammable liquid fires, both in normal municipal operations and in connection with Civil Defense. It is the product of the Fire Department Shops.

The unit is mounted on a G.M.C. chassis and carries two 300 lb. dry chemical extinguishers which are pressurized by nitrogen gas at 300 PSI. Each tank has 50 feet of hose attached, with nozzle. Also, a N-23 Rockwood fog nozzle is attached to a turret pipe fixed to the left side of the body; preconnected hose lines are provided so that the lines can be hoked up to a pumper.

"The Chemical Carrier" has a 500 gal. booster tank, a rubber container attached to the base of the water tank, all a part of the Rockwood proportioner based on the 'round-the-pump principle. The rubber sack holds the foam liquid which is injected into the suction side of the pump by gravity pressure from the water in the booster tank. The water itself also is supplied to the pump by gravity pressure. As long as the tank is kept full, proportioning will be accurate. To keep the water at a constant level in the tank a float arrangement, similar to the float in the ordinary home toilet, will be provided. This and some other details are still being developed. A 2½-in. full-line connection is provided to facilitate filling. And to provide pressure at the nozzle there is a midship mounted 750 GPM pump.

The foam nozzle is the new Rockwood turret gun. This type of gun is reportedly being used by the Navy and Air Forces.

Westchester Chiefs' Plan Elects

The Fire Chiefs' Emergency Plan of Westchester County, N. Y., which originated the idea of directing mutual aid through a County Fire Control Center and now has a membership of over 750, re-elected most of its officers and directors, May 21 at its 23rd Annual Meeting and Dinner, held at the Lawrence Inn, Mamaroneck Village.

The slate for the coming twelve months is as follows: Chief J. E. Carroll, Montrose, president; Chief Irving Wallach, Pelham, first vice-president; Chief Edward J. MacDonald, White Plains, second vice-president; Chief William Lemon, Village of Mamaroneck, third vice-president; Chief Arden N. Smith, Port Chester, Treasurer; Capt. Howard S. Geer, Rye, Financial Secretary; Capt. Arthur R. Miles, Pleasantville, Recording Secretary and Chief Cornelius C. Falch, Rye, Sergeant-at-Arms.

Directors elected are: Comm. Charles E. Jahne, Pleasantville, Chief William Garvin, Yonkers; Chief Edward Gall Sr., Mount Vernon, Chief Roi B. Woolley, Larchmont, and Chief Melville Bohlig, Ossining.

Heavy Registration at N.F.P.A. 56th Annual Meeting

Citing the waste of lives and property caused by fire as deplorable and disgraceful, A. H. S. Stead, of Montreal, retiring president of the National Fire Protection Association, told delegates to the 56th annual meeting of that association "we cannot afford the luxury of a fire tax which is levied against every man, woman and child on the continent."

The meeting, which set new records in attendance, extent and scope of technical and business sessions, began Monday June 9 and closed June 13th. Sessions were held of the Fire Marshals' Section and the Electrical Section on Monday and Tuesday. The latter day also saw meetings on Municipal and Rural Fire Protection, and the Building Code Forum, conducted by John A. Neale, N.B.F.U., as well as the Aviation Seminar.

Wednesday brought sessions on Hazardous Materials, and Transportation Fire Problems. On Thursday, the session subjects were: "Structures, Occupancies, and Fire;" "Home Fire Safety," conducted by Richard E. Vernon; "Industrial Fire Problems," and "Dust Explosion Hazards."

The Society of Fire Protection Engineers of the N.F.P.A. met on that evening and elected the following officers: President, John J. Ahern, director, department of fire protection and safety engineering, Illinois Institute of Technology, Chicago; first vice president, John A. Neale, chief engineer, National Board of Fire Underwriters; second vice president, Elmer F. Reske, manager, Cook County Inspection Bureau, Chicago, and secretary and treasurer, Robert S. Moulton, technical secretary, N.F.P.A.

An elaborate program of entertainment was carried out for the delegates and their families.

Four Lives Lost in Rest Home Fire

The heroic attempt of Mrs. Eva Collins, 53, to rescue a patient in her rest home for elderly persons on Leetes Island Road, Branford, Conn., on May 1, came to a tragic conclusion in a fire which resulted in the death of four women, one of them the would-be rescuer.

Three of the victims, trapped in the house and burned almost beyond recognition, were Mrs. Collins, Mrs. Isabelle Nickerson, 92, and Miss May Swain, 70. There was no one else in the rest home when the fire broke out late in the afternoon.

The bodies of Miss Swain and Mrs. Collins were found together in a second-floor room, and the body of Mrs. Nickerson in her first-floor bedroom. The fourth woman, Mrs. Joseph Rogers, 45, a relative of Mrs. Collins, died from a heart attack when embers from the blazing home started a small fire at a nearby house where she was visiting.

Fire officials believe the fire started by an overheated flue from one of several oil-burning space and water heaters in the rest home. Firemen from Branford, Stony Creek, Pine Orchard, Short Beach and Guilford, all volunteer companies, responded on a general alarm fire call sent out by the Branford Fire Department.

TOM MAGNER

Three Children Die at Bottled Gas Blaze

In Superior, Wis., three children died following an explosion and fire which destroyed a small home. The parents were both away; the mother shopping, the father at work, when tragedy struck.

According to Fire Chief Olaf Sorenson, Superior, the oven gas jet of the kitchen stove had accidentally been turned on by the oldest girl aged 4, left at home. The bottled gas from the kitchen stove reportedly seeped to an oil burner about six feet away, ignited and flashed back to the gas burner. A minor explosion in the kitchen stove then occurred which blew open the oven door and severed the gas pipe, which torched its flames to furnishings and walls.

Two older boys, aged 7 and 5, playing in the yard, noticed the flames but were unable to reach the three children, aged 4, 2½ and 7 months. The older two, scared, ran and jumped into bed. The baby died in her buggy.

A neighbor called firemen, who responded with two units, only to find the 22 x 20 ft. house a mass of flames. The mother, 26 years old, collapsed at the scene, after arriving to find the house destroyed.

The state oil inspector, called to inspect the oil used in the heater and the heater itself, was unable to find anything wrong with the fuel or the heater itself.

Bobby-Soxer Torches Churches

Blue-eyed, 13-year-old blonde bobby-soxer, Margie Elizabeth Davis, of Charlotte, N. C., confessed to setting fires in churches to "get revenge." The fires, according to Fire Chief Donald Charles of the Charlotte Fire Department, caused damage to two churches amounting to between $70,000 and $74,000.

Margie said she "got mad" at St. Martin's Episcopal Church, Charlotte on April 11th when she was refused permission to play ping-pong there. The idea of revenge came to her the following Tuesday, April 15th, and on Wednesday night she got a book of matches at a filling station, went to St. Martin's where she started a fire among the choir robes in the sanctuary. She then went to a nearby drug store to wait.

When she saw the firemen had the fire under control, she returned to the parish house, went into the basement and set fire to an American flag after leaning it against a bookcase.

On Thursday night she returned to the parish house, found choir robes hanging in an upstairs closet and set them afire. This fire caused three alarms and did heavy damage, resulting in the suspicion that it was the work of a pyro!

Margie's peeve at another church—Caldwell Memorial, developed the same day she decided to set fire to St. Martin's, after she had been refused the use of the telephone there. The refusal preyed on her mind, and on Saturday she decided to burn the Presbyterian Church.

She said she went to the church about 12:45 P.M., found the church robes, set them afire, and returned home. She did not know until later that afternoon that the fire had been successfully ignited, when a brother told her the church had burned.

Margie was interrogated by the police about another matter (she previously reported boys were turning in false alarms), but admitted setting the fires when the conversation was steered around to the recent fires.

D. G. SPENCER.

Waterloo, Iowa, Issues Annual Report

In his comprehensive 47th Annual Report of the Waterloo Iowa Fire Department, Fire Chief Ray Tiller recommends a number of improvements, including elimination of railroad grade crossings; a new central office for the Fire Alarm System, and replacement of outmoded boxes; better parking restrictions on narrow streets; adoption of a Fire Prevention Ordinance, and continuance of the levy for the "Old Fire Equipment Fund" to provide funds for modernization of the fire alarm system and to further equip all appartus with radio, including walkie-talkie sets, during 1953.

Only the chimney and portion of the timber framework was left standing following a fire on May 1 in a rest home at Branford, Conn., which resulted in the death of four women, one of whom lost her life when she attempted to rescue one of the patients.

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News of the Manufacturers

Gamewell Announces Changes

Several personnel changes have been announced by The Gamewell Company, 97 year-old manufacturers of fire alarm systems, police signal systems, and precision electro-mechanical devices, Newton Upper Falls, Massachusetts.

Bernard H. Breedlove

William P. Gallant

Frederic S. Bacon, Jr.

Frederic S. Bacon, Jr., has been named General Sales Manager. Mr. Bacon has been actively engaged in the electrical engineering field since his graduation from Northeastern University in 1936. He was formerly Assistant Sales Manager for the Rockbestos Products Corporation, New Haven, Connecticut. A registered professional engineer, he is a member and past-president of the Massachusetts Society of Professional Engineers.

Frank P. Joyce has been appointed Works Manager for Gamewell. From 1944 to 1952 he was Factory Manager of the Henry S. Wright Division of the Emhart Manufacturing Company, Hartford, Connecticut. He is a senior member of the American Society of Tool Engineers, a charter member of the Hartford chapter of the Society of Carbide Engineers, and a member of the Army Ordnance Association.

William P. Gallant from 1937 to 1951 was Personnel Manager for the Continental Screw Company, New Bedford, Massachusetts. He has joined The Gamewell Company to head its enlarged personnel department where he will be responsible for recruitment of the highly skilled personnel essential to the manufacture of precision instruments utilized in the emergency signalling field. He is a member of the American Society of Safety Engineers, the American Management Association, and the Greater New Bedford Personnel Managers Association.

Bernard Breedlove has been a sales engineer with The Gamewell Company since 1940. He has been appointed Sales Promotion and Advertising Manager in view of his broad background as a free-lance contributor to general interest and trade publications. At one time he was managing editor of a national trade magazine in the marine and diesel engine field.

Firemen Ferret Out Source of Gasoline Fumes

Fires and explosion make news. Much less dramatic, as a rule, is the work of preventing them. The exception to that rule was written in the headlines in Minneapolis, recently, when investigators from the city's fire prevention bureau successfully ferreted out the source of dangerous gasoline vapors that seeped into lower levels of the 12-story Grain Exchange.

Carrying an MSA Explosimeter, a sort of "mechanical nose," which measures the concentrations of explosive vapors, the investigators sleuthed through a four-block area of Minneapolis' loop and found that two 550-gallon gasoline storage tanks, buried 150 feet away, were in poor condition and leaking badly.

The ground was of rock formation so the leaking gasoline fumes took the path of least resistance, followed the rock stratum and settled in a pocket in sand and gravel extending to about 26 feet below the street level.

First action of the city's fire prevention officials, following reports of unexplained gasoline odors in a basement store room of the Grain Exchange, was to issue orders that electrical equipment in the store room be cut off, and that smoking be prohibited.

Charles A. Johnson, fire prevention chief, said a preliminary inspection indicated that gasoline vapors were coming up through a hollow post supporting a stairway leading up from the store room.

A hole was knocked in the wall under the stairway and the air tested. Explosimeter reading—10 per cent. The air in the hollow post showed 15 per cent. (A reading of 100 indicates an explosive mixture.)

Inspectors Harlow DuVall (left) and Rufus Palmer check for dangerous concentration of gasoline vapors with an Explosimeter, in basement store room of the Minneapolis Grain Exchange, after workers reported strong gasoline odors. Their sleuthing discovered a vapor concentration within the explosive limit—and a four-block search with the instrument led to source of dangerous fumes.

Then holes were drilled in the concrete floor. This time the readings were more than 60 per cent.

The investigators then began their four-block search, using the Explosimeter, which led them finally to the leaking gasoline tanks.

These were promptly removed, preventing a possible disastrous explosion and fire.

The MSA Explosimeter, developed by Mine Safety Appliances Co., Pittsburgh, Pa., is used primarily by utility companies, industry and mines. But MSA engineers report that many fire depart-

(*Continued on page* 528)

Volunteers pool facilities for more effective protection.

Volunteer firemen of neighboring townships Pulaski and New Bedford, Penna., have pooled their manpower and equipment to form a single company serving both communities with modern fire protection. Shown before two newly acquired trucks are (left to right): Jerry Garrett, Pulaski assistant chief; William Hoy, Pulaski road supervisor; Harold Hepler, New Bedford assisant chief; William Taylor, company president; and Chief Mike Beck. The two assistant chiefs are in charge of the men and equipment in their respective territories, but both are directly responsible to Chief Beck. Each of the new trucks carries a 635-gallon water tank with series-parallel type pumping systems primarily used to deliver high pressure fog. At the rear of each tank is a freeze-proof bucket fill and two compartments. Partitioned hose beds carry 1½" and 2½" hose, and back pack pumps. Additional spaces at the rear for portable pumps or generators are located in recesses under the bucket fills, leaving the rear platforms clear for men. Pump control panels, suction tubes and discharge valves are enclosed by double doors, protected from damage yet readily accessible. The trucks were built by Sharpsville Steel Fabricators, Inc., Sharpsville, Penna.

COAST TO COAST

SEARS, ROEBUCK PROPERTIES

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Short Cuts and Gadgets

WAUWATOSA GOES INSPECTION ONE BETTER

The Wauwatosa, Wis., Fire Department, Chief Douglas Dunlop, and Elmer Damien, Fire Inspector, not only use their two-way radio communication facilities of their new Mack Model 125 pumper to further company inspections in its area, but by means of a bit of "gadgetry," which was evolved by Inspector Damien, "safety inspections" of all public buildings in the city are expedited.

Under Damien's direction, scale models of public and industrial buildings, to which the department considers it advisable to devote special attention, have been constructed. The models, made by members of the department, can be taken apart story by story to show the location of hallways, doors, and so on.

These scale models supplement the actual inspection tours made possible by application of short wave radio to the new 1250 G.P.M. pumper.

Assistant Fire Chief R. A. Gunderson, who also takes a more than parental pride in the models, and in the radio inspection tours, stresses that this type of inspection does not now take the company out of service. Once a week the polished rig rolls out of its station with half its crew aboard. At their destination, they inspect the building under consideration from every angle, familiarizing themselves with the exact location of hydrants, standpipes, and any special hazards that might exist.

When the inspection period is over, the apparatus returns to the station, picks up the other half of the fire crew and the procedure is repeated. All the time the unit is away from its station it is in service ready to roll to a fire, upon receipt of the signal from fire alarm headquarters. The broadcast alarm is picked up by the pumper driver who monitors the radio, and touches off the apparatus siren, which brings the crew on the double. Chief Gunderson says that the inspection crew have been known to reach the scene of the fire ahead of their fellow firemen from the station responding with other apparatus. Since the station is always apprised of the inspection pumper's location, even if radio failed—which isn't likely, a telephone call to the building would start that apparatus promptly on its way.

The extra miles driven by the pumper during these inspections, according to Chief Gunderson, is inconsequential compared with the good done by running the equipment at regular intervals.

The scale models enable the fire fighters to plan their fire attack strategy on each of the important buildings modelled whenever for any reason it is desirable.

* * *

WE NEVER THOUGHT TO SEE THIS!

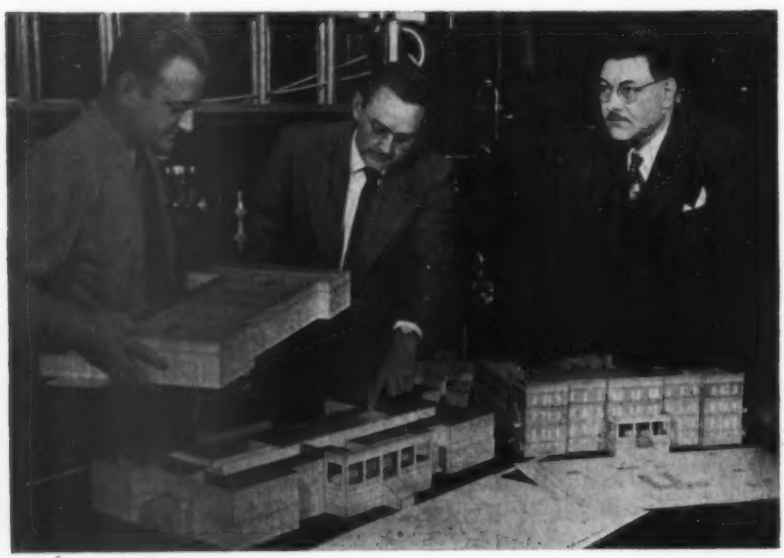
Fitchburg, Mass., firemen added miners' lamps to their fire hats on June 4th, last, and not because they were going underground to fight fires, rather the reverse.

According to Fire Chief Ernest C. Caouette, the step was taken because the men were running into aerial encumbrances in the form of television antennas in connection with their roof operations while fighting night-time fires.

After the men complained they had banged their heads on the television antennas and guywires, Chief Caouette ordered in the miners' lamps.

Maybe we're wrong, but this seems to us to constitute another "first" in the fire service.

(Our thanks to the many who sent in this item.)



Fire Inspector Elmer Damien, Chief Douglas Dunlop and Mayor William Kneuse looking at the scale models of various Wauwatosa buildings which were built under Inspector Damien's direction.

ICE AND WATER RESCUES FACILITATED

Here's an idea that may help facil tate rescues where it is necessary t span thin ice and/or open water. Th stunt was shown at the last Fire De partment Instructors Conference, i Memphis.

A long wall or short extension ladde is laid out flat, and the tip placed o top of an inflated large truck inner tub The ladder and tube are then firml secured together with a rope tie. Guid lines may be tied to the tips of the ladde beams just above the tube so that th entire assembled "gadget" can b maneuvered into position.

* * *

BEER CANS FOR WET WATER—A TIP FOR FOREST FIRE FIGHTERS

Field personnel on certain of the Na tional Forests have been using we water in forest fire control work. The have found that a pint beer can wit cap makes a desirable field containe for wet water. The wetting agent i canned in these pint containers an carried on fire trucks or stored in fir caches for ready use. For the brands o wet water used, a pint is mixed a needed with 5 gallons of water in back-pack can. Some foresters an rangers have suggested that forest fir fighters package "wet" water in simila small containers.

* * *

OUTRIGGERS CAN BE DANGEROUS

The outriggers, otherwise called jack or "tormentors," of modern aerial lad ders, which project from the sides o the apparatus can easily injure a man especially when operations are bein carried on after dark.

The Hartford Fire Department, Chie Henry Thomas, paints these outrigger with white stripes to make them mor visible. Some other departments emplo the luminous paint similar to that use to identify fire alarm boxes and hydrants at night time.

A correspondent of this Journal also asks, why not stripe or otherwise mark the poles (tormenters) of pole-ladders so they will be more visible in the dark?

* * *

KEEP A PAIL HANDY FOR BLOWTORCH FIRE

Here's a thought, adapted from *Popular Mechanics*, which might be worth passing along to the fire service.

Keep an empty bucket handy when you are using a blowtorch. If leaking gasoline blazes up, drop the bucket over the torch to smother the fire.

This is a suggestion too, that fire prevention bureaus might well promulgate to their constituents.

* * *

The Old Timer Says—

It's funny how few fire officers really know anything about the other emergency services in their cities—and vice versa! Perhaps one reason for failure of fire and police to see eye-to-eye on lots of details concerning the safety of the public, and their services, is just plain ignorance. Mebbe somebody ought to really introduce the services to each other—and have more get-togethers, object education, information and — brotherhood!

FOR SKILLED PERFORMANCE BY UNSKILLED OPERATORS

INDOORS AND OUTDOORS

YOUR *BEST* PROTECTION

FOR FLAMMABLE LIQUID, GAS AND ELECTRICAL FIRES

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DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT

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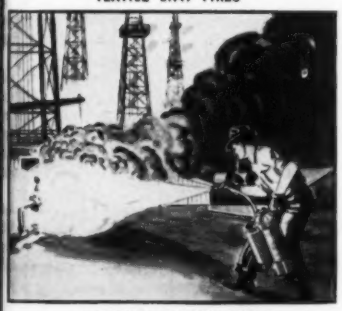
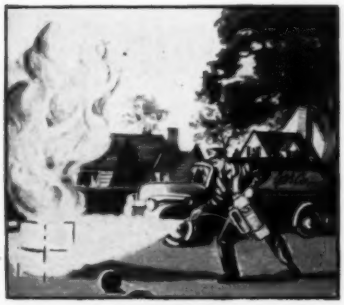
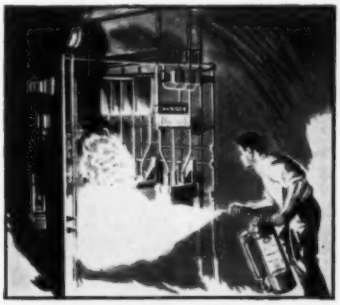


FLAMMABLE LIQUID FIRES



GAS FIRES



ELECTRICAL FIRES

ANSUL Model 20-B

HAND PORTABLES

WHEELED PORTABLES

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STATIONARY EXTINGUISHERS AND PIPED SYSTEMS

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TRUCK MOUNTS, TRAILERS AND SELF-PROPELLED UNITS

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Send for File No. 914. You will receive a variety of helpful printed matter. Included is our latest catalog which describes Ansul Extinguishers of all sizes — from the small Ansul Model 4 to Ansul Piped systems and Ansul 2000 lb. Stationary Units.

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The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Seattle Shaken by "Atomic" (?) Fireball

Seattle Fire and Police Alarm Headquarters, newspaper offices and telephone exchanges were besieged May 11 with inquiries from startled citizens, some of whom wondered if the city was the object of an atomic bomb attack.

According to later reports, it developed that a huge blue-white ball of fire which "rumbled like a freight train" across the sky, exploded directly over the city about 1:30 AM., casting an eerie bluish light over the city and knocking many sleeping folk out of their beds. The blast, reported at an altitude of 2,000 feet, was visible 60 miles.

The phenomenon, believed to be an exploding meteor, was seen by three Police officers and members of the Coast Guard, as well as a Northwest Airlines pilot nearing Seattle. The latter said it was at about 7,000 feet when it suddenly shattered into eight pieces which looked like chain lightning, and fell to earth.

Astronomers doubted that a meteor could get within 2,000 feet of the ground before disintegrating. They said the object could have been a fireball, a big meteor heavy enough to penetrate the earth's lower atmosphere. Meteors, it seems, normally explode more than 10 miles from the earth.

No fires were reported and, thus far, no samples of the whatyoumaycallit have been recovered.

* * *

Brush Fire Claims Two Victims

Early May saw a rash of serious brush, field and forest fires in Eastern states. So serious was the fire hazard that some states closed the woods. Only rain relieved the perilous situation.

One of the worst areas hit was Long Island, N. Y. And one of the worst of the raging fires that kept Nassau and Suffolk County fire fighters on the jump occurred on May 4 in the area from Dix Hills to Brentwood.

Before this fire was controlled, men of 17 different volunteer fire departments, including Brentwood, Babylon, Levittown, Sayville, Northport and Huntington fought from early morning until after midnight without letup.

The crisis came about 1:00 P.M. on the 4th when Brentwood volunteers, with other firemen, seven in all, attempted to cut a fire lane to contain the blaze that threatened Pilgrim State, the world's largest mental hospital. Three Brentwood volunteers were trapped and blanketed by a giant tongue of flame, described by one fireman who escaped as a "huge ball of fire." The men, Martin Ames, 33, father of three small children; Charles Elliott, and Andrew Wittman, all suffered first, second and third degree burns. A fourth man, who escaped, said when the flames engulfed them, they all dove under their fire truck for cover, but it was no use. Although they were rescued alive, the apparatus was destroyed.

The three victims were rushed to the emergency ward of Pilgrim State Hospital; later Ames and Wittman were transferred to Southside Hospital, where Ames died at 7:30 A.M. the following day. Elliott succumbed shortly before 10:00 P.M. the same day. The third victim, Wittman Jr., is reported recovering.

It is said that Eliott was "pressed into service by the Brentwood volunteers" when they responded to an emergency call to battle the blaze that threatened Pilgrim State. The Hospital was saved, together with a number of houses. Other dwellings, however, were damaged by the flames and numbers of outbuildings and garages were burned.

Fire forces responding on mutual aid calls experienced the same difficulty in controlling this fire that has been common in so many similar large area operations—that of top echelon command. This, in turn, according to some observers, was no doubt due to difficulties in maintaining contact and communications throughout the area. The situation might have been improved considerably, reported one correspondent, had all companies had two-way radio. Only a few of the units at work did so, and these made the best possible use of their facilities.

A special disaster fund has been started to provide a measure of relief for the victims. THANKS J. JEBENS

* * *

Another Church Reserves Pews for Firemen

The following communication explains itself:

To the Editor—I read, in your Watch Desk, of a church that reserves pews for firemen, and I would like to add one more to the list, as the Conway Methodist Church reserves its back pews for the Conway Volunteer firemen.

The firemen are alerted by a small siren that warns of the alarm. The church is nearly across the street from the fire station, and about half of the volunteers attend services on Sunday.

The pastor, Rev. C. B. Callaway, on week days drives one of the fire trucks, if needed. The Conway Methodist Church is the oldest Methodist Church in Orange County, Florida, and is located about five miles from Orlando, Florida. CHIEF LEO T. HERBER SR.

* * *

Firemen Race (?) to "Bucket Disaster"

The horrors of bacteriological warfare struck Seoul, Korea, on a certain Sunday. The result was pandemonium. Strong men gasped and swooned. And the faithful EUSAK fire department came racing to the rescue. That is, they "raced" until they got within range of the "emergency."

A honeybucket car had overturned in a street not far from EUSAK headquarters company where the 8038th Engineers Map Reproduction detachment had its vans. It was late afternoon and the ox-borne wagon had a goodly and odoriferous cargo.

First Lt. Richard G. Ellas, De Sota, Mo., detachment commander, says the wagon overturned completely when the ox got restive at being tied to a tree while its owner went off on business. Maybe he went to see a man about an ox, but it would have been a good idea to have oxed his ox for permission to leave the area.

"God, but it was horrible," says Ellas. "My boys were clutching their throats and throwing up. The stuff was all over the street, and it was one helluva hot day. Well, the wagon owner came back and saw what happened, but all he did was grab a bucket and try to scoop up his precious cargo. The ox looked as if it just didn't give a damn. It even had a sneaky sort of leer as if it was glad about the whole thing.

"Then the Korean, who had a pipe in his mouth, dropped his pipe in the muck and began groping around for it. That's when I stopped being an eye witness. We called the fire department boys and they got a crew of Koreans to hose down the street clean. It took them an hour—and what an hour that was.

For the information of our readers who do not know what a "honeybucket" is, we might add that it is a carrier for night soil (human excrement).

(Thanks, PFC. EDW. H. SMITH, somewhere in Korea, and *Stars and Stripes*.)

* * *

Arsonist to Die for Detective's Death

Abraham Keshner, 42-year-old clothing manufacturer, was sentenced to die in the electric chair for setting a fire in which a New York City detective perished. Also killed in the blast and fire were two alleged conspirators, a convicted safecracker and a delicatessen proprietor.

Keshner, who burned his loft building at 9 W. 18th Street last September 10, to collect insurance, was convicted in a trial in which his co-defendant, Jacob Myron, was acquitted. The two were arrested as they left the building to dispose of empty gasoline cans, and a short time later Detective James Daggett of the safe and loft squad died in an explosion which rocked the building and resulted in a five-alarm fire.

Keshner was responsible for Myron's acquittal. The latter claimed that, although he was hired by Keshner to carry cardboard cartons into the building, he did not know they contained cans of gasoline. Keshner backed up this testimony.

Judge Francis L. Valente, who sentenced Keshner, said the case, which involved a fire for which the exact cause was not known and broke out after the defendants were arrested on the scene, involved legal points unique in New York law. He said these concerned the fact that a man is responsible for a felony which he has initiated even if the result of his action occurs some time after the overt act, and that the initiator of a felony is responsible even though an outside cause intervened to complete the act. Testimony during the trial showed that the building was saturated with gasoline fumes when police arrived.

* * *

Only a "Paper Fire"

Mrs. Daniel Craturo, who occupies a fourth floor apartment on Wayne Street, Jersey City, was awakened from a sound sleep early one morning by a noise that sounded like the crackling of a fire.

Mrs. Craturo dashed to the phone and called the fire department. Minutes later, after firemen arrived and tramped up the four flights of stairs, they searched and searched for the fire.

Finally the source of the crackling noise was traced to dining room wallpaper that had been hung the day before. It seems it made the crackling sounds while drying out.

Six families, evacuated by firemen on the chilly morn' returned after the blazebeaters had determined the blaze didn't exist. (Thanks, JACK KEARNS.)

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For maximum fire-fighting power at minimum cost, recommend the new Kidde Standard Pak. It's an inexpensive ready-made system that's easy to build in for protection against tough fires in normal flammable liquid hazards.

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Every kit contains Kidde rate-of-rise heat detectors, Kidde Multijet nozzles, and automatic discharge heads. Pipe and fittings are optional, as are pressure trips and switches, remote controls, sirens, gongs.

For full information send the coupon.

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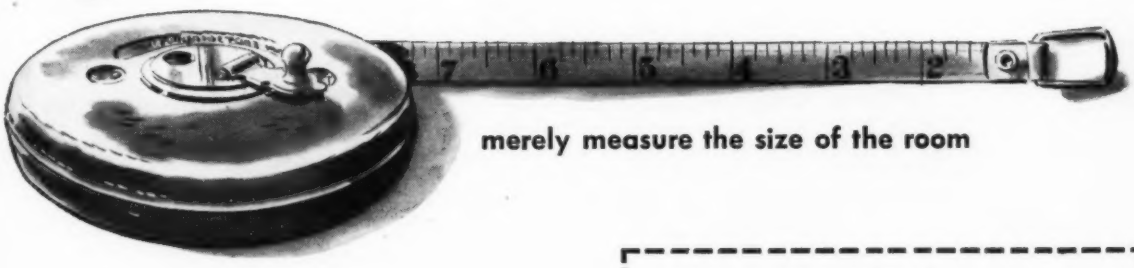

merely measure the size of the room

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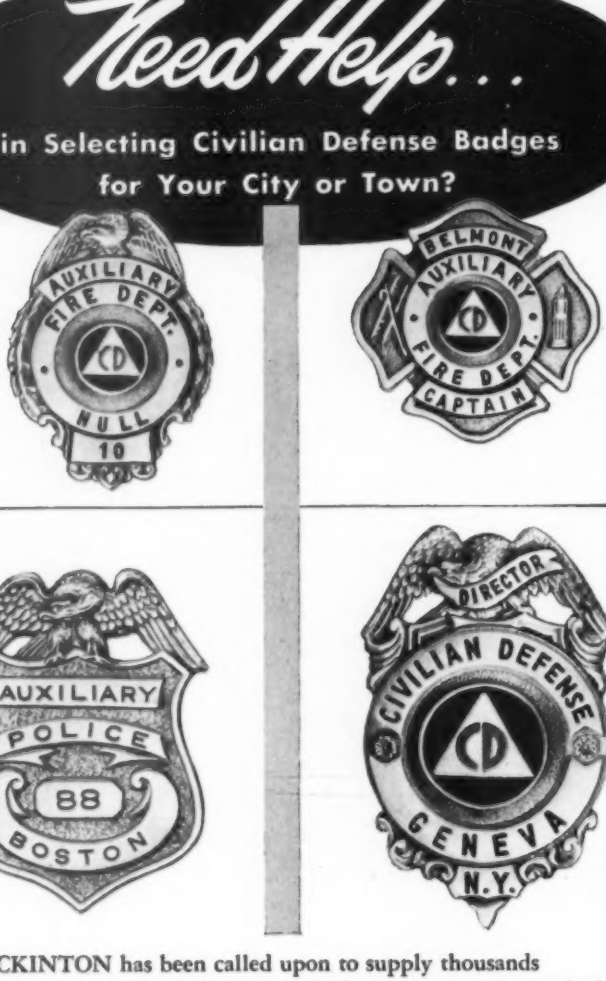
Need Help...

in Selecting Civilian Defense Badges for Your City or Town?



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Eastern Chiefs Meeting

(*Continued from page* 500)

second vice-president, presided at the afternoon sessions, which were led off by the story about New York State's radio network, told by Lieutenant Donald O'Brien, Field Engineer of the New York Division of Safety, Bureau of Fire. Radio is the very foundation of efficient mutual aid, the Lieutenant said, urging all fire officers to give serious thought to its installation locally and on a county, and even state, network basis. It is no longer practical for the fire service to share frequencies with police or other services, he stressed.

Chief Jacob Weber, of Bausman Fire Co. No. 1, Bausman, Pa., gave the delegates something to think about with his paper on "Is Water Relaying a Practical Operation for Volunteer Fireman." His answer is an emphatic *"yes!"*

Chief Bernard Padget interested and amused the audience with his off-the-cuff discussion of "Co-operation Between Paid and Volunteer Fire Departments."

The meeting adjourned at 4:00 P. M., to travel to the Reading Fair Grounds where all hands waded into one of the famous Reading Clam Bakes, presented by Chairman Stoner and staff, including units of the Reading Fire Department—which also participated in a series of demonstrations of the methods of extinguishing oil fires by water fog, fog foam and wet water, using the latest type proportioners

Final sessions on Wednesday were presided over by President Friede and the vice-presidents. The main event was the presentation to the delegates of Chief Rudolph Swanson, president of the International Association of Fire Chiefs who had just returned from European and Puerto Rican visits. Chief Swanson regaled the delegates with stories about European fire services.

Time was given the fifteen or more exhibitors to meet the conferees and tell about their products and services, after which the members got down to the serious business of electing officers for the coming year. The slate as finally determined was: President, Chief Joseph A. Giammatteo; first vice-president, Chief Ellis Wagner; second vice-president, Chief Charles Burnett, Newark; treasurer, Chief George Mitchell, East Orange (re-elected); secretary, Edward Clark, son of the former secretary, Charles E. Clark. Elected delegate to the Eastern Association from the State of New York was Chief Edward J. MacDonald of White Plains, N. Y.

The annual banquet was held Wednesday evening. Over 300 were in attendance, including a score and more of local and visiting notables. Chief speakers were the Rev. C. R. Rahn, pastor, Jacksonville Reformed Church, and Daniel C. McNenna, former Reading City clerk.

Before adjourning, the Conference adopted a number of Resolutions, among them one urging there be no lessening in the present regulations governing the transportation of explosives over the highways; one endorsing the Federal Civil Defense Administration's fire service program, and another expressing the appreciation of the Conference to the City of Reading and its historic fire department.

New York City was selected as the location of the 1953 conference, with the Hotel Martinique as headquarters. The tentative dates are May 20, 21, 22.

Convention Dates

July 21-25—WEST VIRGINIA FIRE SCHOOL. Annual meeting, Morgantown, W. Va. For further information, contact R. E. Hanna, Jr., Director Fire Service Extension Schools, West Virginia University, School of Mines, Morgantown, W. Va.

Aug. 4-7—NORTH CAROLINA STATE FIREMEN'S ASSOCIATION. Annual meeting, Greensboro, N. C. For information contact Chief C. W. Wyrick, Greensboro, N. C., Fire Department.

Aug. 4-8—PENNSYLVANIA FIRE SCHOOL. Annual meeting, Lewistown, Pa. For information, write Edgar A. Spotz, Public Service Institute, P. O. Box 911, Harrisburg, Pa.

Aug. 4-8—FLORIDA STATE FIRE COLLEGE. Units 101, 102, 201. For information contact Chief W. H. Barnett, P. O. Box 785, Ocala, Fla., Superintendent.

Aug. 5-8—IOWA FIRE DEPARTMENT INSPECTORS SCHOOL. Annual meeting, Iowa State College of Agricultural and Mechanical Arts, Ames, Ia. For information contact the Engineering Extension Service, Firemanship Training Division, Iowa State College, Ames.

Aug. 11-15—FLORIDA STATE FIRE COLLEGE. Units 101, 102, 202. For information contact Chief W. H. Barnett, P. O. Box 785, Ocala, Fla., Superintendent.

Aug. 11-15—INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS. Annual meeting, Seattle, Wash. Secretary-Treasurer, George J. Richardson, A. F. of L. Building, Washington, D. C.

Aug. 18-22—FLORIDA STATE FIRE COLLEGE. Units 104, 105, 203. For information contact Chief W. H. Barnett, P. O. Box 785, Ocala, Fla., Superintendent.

Aug. 18-22—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. Annual meeting, East Rochester, N. Y. Secretary, Eugene M. Braun, 4025 Main Street, Buffalo 21, N. Y.

Aug. 25-28—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Boston, Mass. Secretary-Treasurer, Daniel H. Tierney, 8 Robbins Road, Arlington 74, Mass. Headquarters Manager, J. E. Jagger, Hotel Martinique Brodway and 32nd St., New York, N. Y.

Aug. 25-29—FLOKIDA STATE FIRE COLLEGE. Units 104, 105, 204. For information contact Chief W. H. Barnett, P. O. Box 785, Ocala, Fla., Superintendent.

Aug. 31-Sept. 4—DOMINION ASSOCIATION OF FIRE CHIEFS. Annual meeting, St. John, N. B. Secretary, Chief Allan H. Clark, Lakefield, Ont.

Sept. 1-5—FLORIDA STATE FIRE COLLEGE. Units 106, 107, 205. For information contact Chief W. H. Barnett, P. O. Box 785, Ocala, Fla., Superintendent.

Sept. 2-5—OHIO STATE FIRE SCHOOL. Annual meeting, Ohio State University, Columbus, Ohio. For information contact Foss H. Gragg, Assistant Director, Division of State Fire Marshal, Columbus 15, Ohio.

Sept. 2-5—MARYLAND SHORT COURSE FOR FIREMEN. Annual meeting, University of Maryland, College Park, Md. Director, Robert C. Byrus, Fire Service Extension, University of Maryland, College Park, Md.

Sept. 8-12—VIRGINIA STATE FIRE SCHOOL. Annual meeting, Number 9 Fire Station, Norfolk, Va. Out of state fire personnel will be welcome. No fees for registration. For information contact: Fire Marshal Clay A. Easterly, Director, P. O. Box 1112, Martinsville, Va.

Sept. 11-12—JEFFERSON COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual tournament and convention, Black River, N. Y. Secretary, Jack Farrell, 513 Lakeview Drive, Dexter, N. Y.

Sept. 14-17—PACIFIC COAST INTER-MOUNTAIN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Las Vegas, Nev. Secretary-Treasurer, Jay W. Stevens, Merchant Exchange Building, San Francisco, Calif.

Sept. 16-17—IOWA FIREMEN'S ASSOCIATION. Annual meeting and tournament, Bellevue, Ia. Secretary-Treasurer, Carl H. Fuchs, 2749 Kinsey Avenue, Des Moines, Ia.

Sept. 29-Oct. 2—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Hotel Statler, Boston, Mass. Secretary, Irvin Shulsinger, 130 West Forty-Second Street, New York 36, N. Y.

Oct. 20-22—THE NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting Kearney, Neb. Secretary-Treasurer, Russell D. Salak, P. O. Box 312, Schuyler, Neb.

Ford's RIVER ROUGE PLANT

SELECTS Scott Air-Paks TRADE-MARK FOR

24 — HOUR FIRE PROTECTION

Trained firemen, protected by SCOTT AIR-PAKS and other equipment specially designed to reduce the danger of serious fires, are on duty 24 hours a day at the Ford Motor Company's River Rouge plant. Never certain what terrific breathing hazards the next fire will include, plants like Ford's, play safe by carrying SCOTT AIR-PAKS to every emergency.

Often Scott units have made it possible for firemen to get to the sources of small plant fires before they could develop into big blazes, endangering many lives and millions of dollars in property. Peace of mind and complete confidence is inspired by plenty of COOL, PURE AIR, (not oxygen) as the men do their jobs safely, with lungs and eyes protected from dangerous atmospheres.

Thousands of SCOTT AIR-PAKS are protecting health and lives and saving production time on *maintenance and repair work too* — in plants throughout the nation.

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SCOTT SLING-PAK... Fast, lightweight Scott unit for emergencies — where speedy action counts!

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FALSE ALARMS

Stringing the Warden

An elderly fisherman had no sooner put his rod together—hadn't even strung his line—when the warden jumped out from behind a tree and demanded his fishing license. The old man took his time, then said, "Ain't fishin'!"

He picked up his things and moved upstream, the warden following. The fisherman found another likely spot—whipped his bare rod, and again the warden demanded his license. "Ain't fishin'!" chortled the other. This went on for hours, the old feller getting quite a kick out of the game, while the warden began to froth at the mouth.

Finally the fisherman picked a good spot, strung his line, chose his fly and was ready to cast. Only then did he dig his hand in his pocket, pulled out a license and said cheerfully, "Now I'm fishin'!"

Pointers in Salesmanship

A gentleman in the optical business was instructing his son in the technique of edging a fair and honest price out of a customer.

He said: "Son, after you have fitted glasses to a customer and the customer asks, 'What's the charge?' you say:

"'The charge is ten dollars.'

"Then you pause and watch for the flinch.

"If the customer doesn't flinch, you say: 'That's for the frames; the lenses will be another ten dollars.'

"Then you pause again—but this time just slightly—and again you watch for the flinch.

"If the customer doesn't flinch, you say: 'Each.'"

The last war brought a lot of displaced persons; the next one may bring a lot of dispersoned places.

Uncle Sam is going Atlas one better these days. He's carrying the world with his hands in his pockets.

Tillie: My kid sister has been invited to her first formal dance. She has been pleading for a strapless gown, but mother won't hear of it. Mother says she is too young for a strapless; sister insists she isn't.

Blanche: Well, honey, if it was me here's what I'd do. Why don't you take her down to the department store and let her try on a strapless. If it doesn't fall down, she's old enough to wear it.

"By the way, may my wife and I file a joint return?"

The employe, referring to papers, records and such, answered:

"Why certaintly, do you have the dope with you?"

"Yeah," came back the tavpayer in all seriousness, "she's sitting outside in the car; I'll go get her."

A hillbilly youngster had been drafted into the army. Four months later his parents, good solid Tennessee mountain folk, received a letter from him at his camp in Texas.

"Oh, Paw," his mother said. "Our Daniel allus wuz sech a good hearted boy. Do you know what he says in the letter thet he's doin' now?"

"No, what?"

"He's supportin' two little Indian boys."

"What's he say about hit?"

"He says, 'Please, Maw, send me fifty dollars at once. All my money has gone to Snake Eyes and Little Joe.'"

With Pardonable Pride

Boss: These pinheads on the map are my salesmen.

Words and Malady

In a certain war plant, the workers are submitted to an intelligence test periodically. One of the questions in this test involves a long list of diseases, and the question is asked: "Which of these diseases is most feared?" A dictionary was provided to aid in answering. It was noted by the inspectors that the female workers invariably indicated that claustrophobia was the most feared malady in the list, and couldn't quite understand it, until someone looked up the dictionary definition and found that the meaning was "Fear of confinement."

Observation

A schoolteacher was telling her class about the value of observation and said, "Now, children, look at the clock. What has the clock got that I have, too?"

Mary stood up and said, "It has a face," Martha raised her hand, and said, "The clock has hands."

"Splendid," said the teacher. "Now what has the clock that I haven't?"

After a long silence Johnny rose and said, "Please, Marm, you ain't got no pen-du-lum."

Liars

A minister out for his daily walk came upon a group of boys gathered about a small puppy.

"What are you doing with the dog?" asked the kindly minister.

"Whoever tells the biggest lie gets to keep the dog," answered one of the boys.

"My, my," said the minister, "When I was a boy, I never told a lie."

There was a moment of silence, then: "Here, mister," said one of the boys, "You get the dog."

The dentist asked his new patient if he had been anywhere else before seeing him.

"Only to the village druggist," said the patient.

"And what idiotic advice did he give you?" asked the dentist with the professional man's usual contempt for the layman's opinion.

"Why, he told me to come and see you," said the patient innocently.

Teacher: "Harold, what are the three great American parties?"

Harold: "Republican, Democrat and cocktail."

Accepted

The draft board doctor was examining a prospective recruit.

"Read that chart," he commanded.

"What chart?" asked the draftee.

"That's right," said the Doc, "there isn't any chart. You're in, boy!"

Cold

A drunk staggered home and made his way subconsciously through the house, winding up in the shower of his bathroom. As he groped about, he turned on the water, deluging himself plenty and making a racket which brought the Little Woman to the scene.

Taking in the details, she called him all kinds of soandso, winding up with a none too flattering estimate of his past, present, and future.

"That's right honey," admitted the shuddering sot. "I'm everything you said—and worse. But let me in, won't you? It's raining something awful out here."

Two South Korean soldiers, who had volunteered for service with U. N. sky troops, asked an officer:

"From what height are we supposed to jump?"

"Five hundred feet," was the reply.

"Nothing doing," they said. "It's too high. Can't we try from three hundred feet?"

The officer explained that from such a low height there was a danger of the parachutes not opening in time. The South Koreans broke into smiles.

"Oh, that's different," they said. "We get parachutes, do we?"

When the white man discovered this country, the Indians were running it. There were no taxes. There was no debt. The women did all the work. And the white men thought they could improve on a system like that!

The bus passenger rushed excitedly up to the driver and cried, "Driver, driver, that fellow sitting opposite me is a crazy man. He claims he is George Washington!"

The bus driver thought a minute and then said, "Be calm, lady; I'll take care of the matter." Then, slowing down his unit perceptibly, he called loudly, "Next stop, Mount Vernon!"

Mrs. Gorsh was being shown wool coats at an exclusive department store. There were two that looked exactly alike, but one was priced at $125, the other at $150. "What's the difference in these two coats?" she asked.

"Why madam, this beautiful one at only $150 is pure virgin wool."

Mrs. Gorsh considered this for a minute, then said, "I'll take the one at $125. Why pay $25 for what a sheep does on its own time?"

Andy: "What's the big idea—painting your car green on one side and red on the other?"

Sandy: "It wins accident cases. You ought to hear the witnesses contradict each other."

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Questions and Answers

Electrical Hazards of Metal Aerial

To the Editor:

What effect would there be on a man on a steel aerial ladder if the ladder should come in contact with a high voltage electric wire, when the truck is grounded with the jacks out; when the jacks are not in use and the truck is insulated by the tires?

I realize that it would be fatal for the man to touch the wire or for a man on the ground to touch the truck when the ladder touched the wire, but I wonder if there would be any danger to the man operating the ladder or to a man on the ladder above the wire.

M. J. B.

Answer: If a steel aerial ladder comes in contact with an overhead high voltage electrical wire, the man on the ladder should suffer no dangerous flow of electric current through his body, whether the truck was grounded or not. The drop in voltage from the hand to the foot (each being on a separate rung) would be so small that no shock should be felt.

If the truck is insulated by tires, then there would be no flow of current and, of course, the man on the ladder would feel no shock whatsoever. It is when a man provides a conductor from the wires to the ground or from a charged ladder to the ground that the danger is extreme.

You may have noticed linemen working on high voltage wires strung on wooden poles. They experience no shock, for they do not themselves constitute a conductor to carry current to the ground or from one side of a circuit to the other.

Fire Hazard of Diesel Locomotive Exhaust

To the Editor:

I was asked by a cattle rancher whose land borders on a railroad if a diesel-powered engine would ignite dry grass near the railroad right of way. My answer was that occasionally an engine of this type will blow carbon out the exhaust and start grass fires. Am I right?

D. B.

Answer: Your question was referred to Mr. W. E. Todd, Secretary, Association of American Railroads, and he advises us as follows:

"This matter was submitted to the Committee on Rolling Equipment—Locomotives of the Fire Protection and Insurance Section, and I am now in receipt of advice from the Chairman of that Committee concerning the matter as follows:

"We operate a great many diesels through dry grassy areas and to date have no report of a diesel unit setting fire to any right of way. It is my personal belief that it may be possible for a unit to set fire to a grassy area, but I do not believe it is probable if units are in good mechanical condition."

Different Answers for Same Problem

To the Editor:

A pumper is pumping through 2000 feet of 1½-inch rubber lined hose equipped with a ¼-inch nozzle. The engine pressure is 100 pounds. What is the pressure at the nozzle?

The above problem when worked by two different methods varies by almost 20 pounds. Why?

One of the methods was by use of the formula $N.P. = E.P. \div (1 + KL)$. The other was to change the 1½-inch lines to a 2½-inch with the same given nozzle.

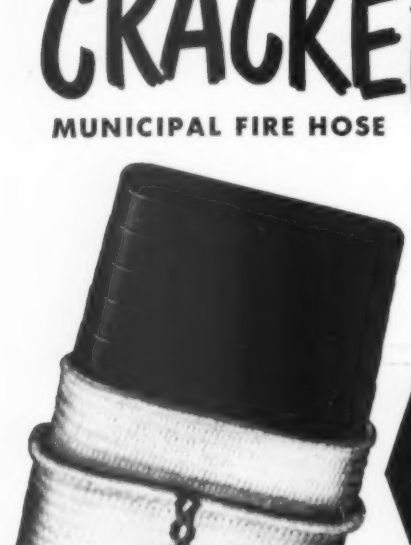
R. F. S.

Answer: The first method is by employing the formula: $N.P. = E.P. \div (1 + KL)$. In this formula, which differs a little from the formula for 2½-inch hose, we have within the parenthesis 1 instead of 1.1, as you will note.

Engine pressure is 100 pounds. L, the number of 50-foot lengths of hose in the line, is 2,000 ÷ 50, or 40. K for ¼-inch nozzle on 1½-inch hose is .0084.

Then $N.P. = 100 \div (1 + .0084 \times 40)$
$= 100 \div 1.336$
$= 74.8$ pounds approximately.

CRACKERJACK
MUNICIPAL FIRE HOSE



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The second method is to first change the 1½-inch hose to 2½-inch by dividing by the factor .074.

.2000 ÷ .074 = 27,027

Engine pressure is 100 pounds. L, the number of 50-foot lengths of hose in the line, is 27,027 ÷ 50, or 250.5. K for ¾-inch nozzle on 2½-inch hose is .0016.

Then N. P. = 100 ÷ (1.1 + .0016 x 250.5)
= 100 ÷ 1.5
= 66.7 pounds approximately

You will note there is a difference of but 8.1 pounds in the two answers, which is not serious in view of the long stretch and small flow involved.

Nozzle Pressure on Elevated Line

To the Editor:

Three hundred feet of 2½-inch hose is laid to a fire. The 1⅛-inch nozzle on the 300 feet of hose is elevated 100 feet off the ground. The engine pressure is 215 pounds. What is the nozzle pressure?

E. J. C.

Answer: The elevation of the nozzle above the pumper represents a back pressure which must first be subtracted from the engine pressure before the problem is solved. The back pressure equals 100 x .434, or 43.4 pounds.

Subtract this from the 215 pounds engine pressure, and you have 171.6 pounds, which is the pressure left to overcome friction loss in the hose and give nozzle pressure.

The formula for finding nozzle pressure, when length and diameter of hose line, and engine pressure are known is N. P. = E. P. ÷ (1.1 + KL).

K, the factor for 1⅛-inch nozzle on 2½-inch hose, is .167.

L, which is the number of 50-foot lengths of hose in the line, is 300 ÷ 50, or 6.

Then N. P. = 171.6 ÷ (1.1 + .167 x 6)
= 171.6 ÷ 2.102
= 81.6 pounds approximately.

New York Firemen Fight Millionth Blaze Since 1918

At 1:51 P.M., Saturday, May 31st, New York City fire fighters fought their millionth fire since they formed their line organization on Armistice Day, 1918.

The minor blaze in a six-story tenement at 361 E. 10th street was located in a kitchen cupboard of the two-room apartment of Harry Schiffer. A neighbor saw smoke and ran around the block to the quarters of Engine 28 on E. 11th street, and at the same time another neighbor pulled a box nearby. Firemen under Battalion Chief Elmer A. Ryan, 6th Battalion, and the crews of Ladder 11 and Engine 28 made short work of the fire.

At 12:01 on the 31st, a platoon of reporters and photographers assembled at Central Park, Manhattan Fire Alarm Bureau to watch for and report the coming of the 1,000,000th fire in the nation's biggest city. With the dispatching of the alarm, the men piled into cars and responded, to find the fire out and crews picking up. But they got their story.

Since 1918, 244 of the city's firemen have been killed in line of duty and 42,690 have been injured.

Preferred power on portable fire fighting pumps and floodlight electric plants — the world's most widely used single-cylinder gasoline engines on machines, tools, appliances used by municipalities, industry, construction, railroads, oil fields, and on equipment for farm and home.

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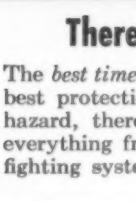

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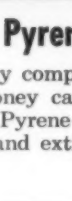
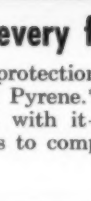
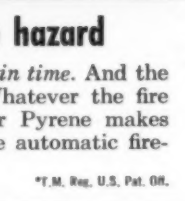


Cartridge-Operated
For ordinary fires. No annual recharging.



Chemical Foam
For flammable liquids, ordinary combustibles.



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World Wide Fire News

By Roi B. Woolley

Army's Biggest Korean Dump Blasted

Fire raged out of control for many hours June 17 following a series of explosions at the largest Allied ammunition dump in Korea, which killed one American soldier and left 33 other persons dead or missing. Two United States soldiers are listed among those missing and 24 others suffered minor injuries.

The explosions sent shells flying as far as two miles from the dump. Rockets zoomed crazily into the air, pieces of metal as large as typewriters were hurled half a mile or more from the half mile square area. Exploding flares touched up the scene with bright colors. Grass fires flamed up around the perimiter of the dump.

According to the scant official information released, the initial explosion was believed to have been touched off by a fire which started in a plant where ammunition was reconditioned for reuse. Army Criminal Investigation Agents searched for evidences of sabotage.

Fire-fighters maneuvered tank-bulldozers around the edge of the dump, throwing up walls of earth, but officers said it was almost impossible to bring the mass of exploding shells, flares, bullets and rockets under control and that the fire would have to burn itself out.

The blasts drove 20,000 to 30,000 Haeunde villagers from their homes and broke windows thirteen miles away in the Pusan City Hall. Extra troops were moved into the area to prevent looting as details of doctors and ambulances were ordered in.

* * *

Soviet Raid Warning Brings 24-Hour Air Alert

Convinced by Air Force officials of the threat of a sneak Soviet air attack, state civil defense officials on June 16 pledged to inaugurate a twenty-four-hour plane spotting service by civilian volunteers, beginning July 14.

The decision was arrived at after a 24-hour meeting of civil defense and Army Air Force officials at the Pentagon, at which the directors of all state civil defense forces but two agreed to reconsider an earlier decision to postpone a constant alert for possible low-altitude attacks.

They agreed to man spotting stations in 27 states ringing the vulnerable northern perimeter of the country and West and East Coasts as far south as San Diego in the West, and North Carolina in the East.

The directors' decision came after Thomas K. Finletter, Secretary of the Air Force, told the session that while he was not trying to scare anyone, it was a fact that the Soviet Union had the capability to attack now and that casualties in a surprise attack would be "fantastic." C. D. officials were also told by Gen. Nathan F. Twinging, Acting Chief of Staff of the Air Force, that the Soviet Air Force could launch a 400-plane attack by four-engined bombers, capable of striking with both atomic and conventional bombs at "all our major metropolitan targets."

Members of the Ground Observer Corps are being asked to maintain 19,400 observation points. Fifty to

ighty volunteers will be needed for ach. Now in "Phase One," the 27-ate plan will be expanded under Phase Two" to thirty-six states and to 0,000 volunteers.

Active and auxiliary firemen are not alled upon to volunteer for such ervice.

* * *

rom the World Wide News Tickers

From Vienna, Austria, came the report in May that eight factories in Communist Hungary were destroyed by fires set by the anti-communists underground since March 23. . . . An explosion of 38,000 cartridge primer caps at the Twin City Arsenal near St. Paul, on May 8, killed one man and injured another. . . . Eight sailors were critically burned May 9th at the Newport, R. I. Navy fire fighting school, Newport, R. I., when they were caught in a "backfire" as they entered the cement building which houses the school to extinguish smudge pots. . . . A Mamaroneck, N. Y., man was fined $20 May 9th in Municipal Term Court, New York City for smoking a cigarette in a Columbia Broadcasting System studio at 9:00 P.M. on April 30 while a program was going on the air. Fine was levied by Magistrate Amedeo Lauritano on the testimony of Edward Coughlan a New York City Fire Department investigator. . . . Firemen aided in the rescue of two student nurses from the side of the Niagara gorge, May 10, about five hours after the girls became stranded on a ledge while trying to scale a cliff. Firemen played searchlights on the cliffside while two policemen made their way to the nurses. . . . The Bellmansaro, one of Stockholm's most exclusive restaurants, was badly damaged by fire May 13. There were no casualties. . . . Sixteen fuel oil tank cars and four filled with high octane gasoline burned in a train wreck near Corsicana, Tex., on May 11. Oil and other flammable chemicals, including carbon black and ammonia, fed the fire, which destroyed 35 cars of a 65-car train and caused estimated $3 million damage. . . . One person was killed on May 11, when fire of undetermined origin swept through two civilian dormitories at the Far East Material Command headquarters, Tokyo, Japan. Sixty Americans were safely evacuated from the burning buildings. . . . Several houses were damaged and windows smashed at a distance of more than a mile when a storage dump of wartime German torpedoes and mines and small ammunition exploded near Kiel, on May 11. No casualties were reported. . . . Photographs and mementoes of the late President William Howard Taft were lost in a fire which destroyed the old family summer home at Murray Bay, Quebec. Believed to have been caused by a brush fire, the blaze burned the cottage, which has belonged to the family since 1905. . . . Fire destroyed most of the business section of Tuguegarao, capital of Cagayan Province, the Philippines, on May 12. About 1000 persons were left homeless. Damage was estimated at $1½ million. . . . More than 2,000 natives of Indo-China were made homeless by a fire on April 28 that swept their straw huts near Saigon. A spark reportedly started the fire in Ban Co, a poverty-ridden district. . . . When a big gunpowder magazine blew up in the crowded industrial zone of Mexico City on April 28, 100 or more persons were injured. Factories in the same block with the magazine were blown

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down and windows shattered over a radius of a mile. Nine tons of explosives stored in the factory let go! Don't they have laws in Mexico? . . . While we're still in Mexico, we might include mention of a panic that occurred at a boxing show in Pashuco during an electric storm, resulting in the deaths of five persons and injuries to 14. There was no fire. . . . An American pianist, Lamar Crowson, of Tampa, Fla., aged 25, retained his composure and continued to play during a small fire at the Brussels Music Conservatory May 9. He was participating in the Queen Elizabeth International Music Contest. The jury chairman later announced a brief recess, while firemen went to work. Short circuit in the basement and more smoke than fire.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of June, 1952.

Month Ending June 30, 1952

Hartford, Ala.—Planing mill and whse. at Toole Lumber Co. destroyed. Flash fire.
Phoenix, Ariz.—Phoenix Livestock Auction destroyed.
Holbrook, Ariz.—Babbtis Bros. whse. destroyed. Spontaneous ignition.
Calico Rock, Ark.—Princess Theatre destroyed. Adj. cafe damaged.
Murray, Cal.—Repair shop, car storage garage and 15 motor vehicles at Kettleman Hills compressor station of Pacific Gas & Electric Co., destroyed.
Rio Vista, Cal.—Grain elevator of Islands Elevator Co. on Ryer Island destroyed. Light bulb dropped during fumigation.
San Diego, Cal.—B-36 superbomber at Consolidated Vultee yard destroyed.
San Francisco, Cal.—Freighter Jeff Davis of Waterman Line, Pier 50, damaged.
San Francisco, Cal.—Giario Bros. Furniture Co. damaged.
San Francisco, Cal.—Maye's Oyster House damaged.
Tracy, Cal.—W. & P. Surplus Sales Co. bldg., a mile east, destroyed.
Tulare, Cal.—Main bldg. of Central California Livestock Corp., destroyed.
Ukiah, Cal.—Elmer Padula Lumber mill destroyed. Sparks from an edger motor.
Wilmington, Dela.—T. & C. Baking Co. damaged. Short circuit in oven.
Lakeland, Fla.—Tonkel's auto parts plt. destroyed. Spark from an acetylene torch.
Ellijay, Ga.—Ellijay High School destroyed. Lightning.
Griffin, Ga.—Griffin Wood Products Co. destroyed. Lightning.
Chicago, Ill.—Bldg. owned by L. A. Young Spring and Wire Corp., damaged.
Chicago, Ill.—American Paint Co. plt. destroyed.
Chicago, Ill.—Terre Paper Box Co. damaged.
Collinsville, Ill.—Fairmont Park Race Track grandstand damaged.
Stickney, Ill.—Whitco Chemical Co. whse. destroyed.
Mentone, Ind.—Grain elevator on south side of Nickel Plate Railroad, owned by Lee Valentine, destroyed.
Mowhawk, Ind.—Grain elevator operated by Acme Goodrich Co., destroyed.
Abilene, Kans.—Midwest Mill and steam laundry damaged, three coal sheds, workshop, lumber yard and whse. destroyed.
Boston, Mass.—Commercial Bldg. at India Wharf on Boston waterfront, damaged.
Boston, Mass.—Venice Grocery Co. damaged.
Fall River, Mass.—Bldg. occupied by Allen's Cut-Rate Perfumery Co., United Men's Shop and Nopareil Luncheonette, damaged.
Detroit, Mich.—House of Diggs Funeral Home destroyed. Overheated Incinerator.
Holly, Mich.—Kroger Grocery bldg. and Daylight Dept. Store bldg. damaged.
Ithaca Mich.—Ideal Theatre bldg. damaged.
Rogers City Mich.—Dwelling and lumber mill of Edward Kaszubowski, destroyed.
Mankato, Minn.—Kato Ballroom destroyed.
St. Paul, Minn.—Waldorf Paper Products Co. whse. damaged.
Kansas City, Mo.—Santa Fe freight dock at railroad's freight terminal destroyed.
Poplar Bluff, Mo.—Snider Super Market damaged.
Lincoln, Neb.—Two frame bldgs. destroyed and adj. structure damaged near state fair grounds, damaged.
Las Vegas, Nev.—Swank Villa Venice restaurant destroyed.
North Woodstock, N. H.—Deer Park Hotel destroyed.
Asbury Park, N. J.—Whse. leased to Richard Trucking Co. destroyed.
Newark, N. J.—United Carbon Co. whse. destroyed.
Wildwood, N. J.—Hotel Elmira destroyed.
Alexandria Bay, N. Y.—Dwelling on one of the Thousand Islands, owned by Charles Rudermand, destroyed.
Ausable Chasm, N. Y.—Restaurant and souvenir shop at entrance to Ausable Chasm, popular tourist attraction, destroyed. Defective wiring.
Batavia, N. Y.—Barn on farm of Robert L. Acomb, eight miles east, destroyed.
Belmont Park, L. I., N. Y.—Barn and 21 horses at Belmont Race Track destroyed.
Colonie, N. Y.—Wholesale Service & Supply Corp. whse. damaged.
Cortland, N. Y.—Sawmill owned by Ralph Heller, destroyed. Overheated boiler.
Gibson, N. Y.—Calvary Baptist Church, Steuben County, destroyed.
Homer, N. Y.—Jones Feed Mill, Inc., grain elevator destroyed. Spontaneous ignition.
LeRoy, N. Y.—Storage bldg. owned by Jell-O Division of General Foods Corp., destroyed.
LeRoy, N. Y.—Two business blocks housing a furniture store, a drug store, a dry goods store and a shoe store destroyed. Boys playing with matches.
Oneida, N. Y.—Baugh and Sons Fertilizer Mixing plt. destroyed.
Rochester, N. Y.—Lake Shore Country Club destroyed.
Clayton, N. C.—Two storage whses. of Central Oil and Milling Co., destroyed.
Louisburg, N. C.—Dry kiln and lumber shed of Taylor-Thayer Lumber Co. destroyed.
Sanford, N. C.—Sanford Tobacco Co. storage whse. destroyed.
Sanford, N. C.—Darf Rake plt. destroyed.
Williamston, N. C.—Abbitt's Grist Mill, five miles out, damaged.
Winston-Salem, N. C.—Woodfinishing Products Co. plt. on Highway 62, ten miles south, destroyed.
Winston-Salem, N. C.—Dunn's Laundry destroyed.

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The nickel plate, red paint, gadgets and polish are good if you can afford them. But all you need for sound, economical fire protection is an Oberdorfer All Bronze Pump hooked up to the transmission of a dependable truck that carries a tank of water loaded with a good wetting agent.

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Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
1600	120	500'—1½"	15'	150

For complete specifications of this and other Oberdorfer All Bronze Booster Pumps, and name of your nearest distributor, write:

FIRE PUMP DIVISION OBERDORFER FOUNDRIES, INC., Syracuse N.Y.

Edgeley, N. D.—Coffee Shop Cafe; Jennings Barber Shop; Edgeley Drug Co.; Style Shop and Palace of Eats at junction of State Highway 13 and U. S. 281, destroyed.
Barberton, Ohio—Globe Crayon Co. damaged.
Cleveland, Ohio—Zephyr Room, night club, destroyed.
Columbus, Ohio—Koehnler Bros. hardware store destroyed. Flash turpentine fire.
East Liverpool, Ohio—Midler estate bldg., housing City Market and Bakery, destroyed.
Farmersville, Ohio—St. Andrew's Lutheran Church destroyed. Lightning.
Shaker Heights, Ohio—Max Gruber's Restaurant damaged.
Springfield, Ohio—Koehler Bros. hardware store, U. S. Route 40, damaged.
West Jefferson, Ohio—Stokely-Van Camp cannery main processing plt. destroyed.
Anadarko, Okla.—Three downtown bldgs. housing a whse., a rooming house and a plumbing co. damaged. Defective electrical wiring.
Baker, Ore.—Harr & Horton paving mixing plt damaged. Faulty fuel tank.
Coquille, Ore.—Coquille Community bldg. destroyed.
Eugene, Ore.—Star Furniture Co. destroyed and St. Francis Hotel damaged.
Salem, Ore.—Earl Burk bldg. housing feed store and machine shop damaged. Explosion.
Sandy, Ore.—Sandy shingle mill destroyed.
Clairton, Pa.—Schmidt Hotel destroyed.
DuBois, Pa.—Four garages, a shed and dwelling of Stanley Dietrick, destroyed.
Glassport, Pa.—Gross Bros. Furniture store and adj. Star Theatre bldg. damaged.
Gratz, Pa.—Dormar Mfg. Co. plt. damaged.
Lancaster, Pa.—Bldgs. on Abraham B. Charles farm, destroyed.
Manor, Pa.—Bldg. on Abram Charles farm, two miles north, destroyed.
Old Forge, Pa.—Combination rectory and parish auditorium of St. Michaels Russian Orthodox Church, damaged.
Russell, Pa.—Sawmill operated by George W. Walker destroyed.
Hartsville, S. C.—Pee Dee Horse & Mule Co., Newsome Livery & Feed Stable, Saleeby Liquor Store and Carolina Hardware Co. storage whse., destroyed. Spontaneous ignition.
Kingstree, S. C.—Kingstree Hotel damaged.
Yankton, S. D.—Trondheim Lutheran Church, two miles west, destroyed. Lightning.
Cleveland, Tenn.—Pace Seed Co. plt. destroyed.
Crossville, Tenn.—Downtown apt.-business bldg. damaged.
Dyersburg, Tenn.—Grain storage plt. and elevator destroyed.
Eaglesville, Tenn.—Combination cafe-poolroom of Herbert Phillips, W. T. Lowe's hardware store, Russell Puckett's grocery and local post office, destroyed.
Jellico, Tenn.—Mine shop of Arnold Coal Co. destroyed.
Memphis, Tenn.—Whse. bldg. owned by M Hirsch destroyed.
Sparta, Tenn.—Theatre bldg. damaged.
Houston, Tex.—Sid's Ranch destroyed.
Layton, Utah—Rasmussen Feed & Grain Co. plt. destroyed. Spontaneous Ignition.
Ogden, Utah—Royal Canning Co. plt. owned by Bamberger Railroad, destroyed.
Ogden, Utah—Bldg. housing Arsenal fire dept., destroyed.
Lynchburg, Va.—Lynchburg Milling Co. grain elevator destroyed. Spontaneous ignition.
Roanoke, Va.—Budget Dress Shop and Jo-Bell Hat Shop destroyed. Schulte-United Dept. store damaged.
Port Richard, Wash.—Howe Motor Co. destroyed. Incendiary.
Tacoma, Wash.—Lilly Feed Co. whse. destroyed.
Pt. Pleasant, W. Va.—Barn on Mrs. M. Dawley's farm, six miles east on Route 17, destroyed.
Milwaukee, Wis.—Bldg. housing four firms including Premier Plastic Co., destroyed.
Casper, Wyo.—Main bldg. of Rohiff Lumber Co. destroyed.
Centennial, Wyo.—Old Corral, dance hall and bar, destroyed. Floor heater explosion.
Brilliant, B. C.—Planing mill and stacked lumber, damaged.
Exeter, Ont.—Whse. of Exeter District Farmers Co-operative, destroyed.
Guelph, Ont.—Wellington Motors, Ltd., garage bldg. destroyed.
Lucknow, Ont.—Anderson Flax Products Ltd. plt. destroyed.
Oshawa, Ont.—Oshawa Wood Products Co. plt. and adj. bldgs., destroyed.
South Chatham, Ont.—Three stores and a real estate office destroyed.
Toronto, Ont.—Century Cleaners, Ltd., plt. destroyed.
Algiers, Que.—Rodger River Lumber Co. sawmill destroyed.
St. Urbain, Que.—Five bldgs., including the village main bldg., general store, post office, bank and the Quebec Telephone Co. exchange, destroyed. Explosion caused by can of paint placed on a hot electric stove.

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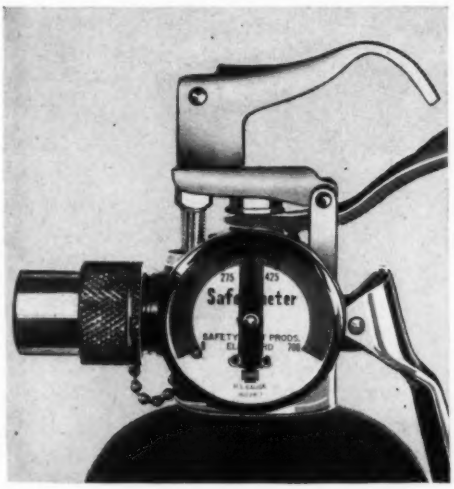

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DRY CHEMICAL Fire Extinguisher

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- Safe-T-Meter eliminates the risk of facing a fire with an inoperable extinguisher, when the needle is in the green zone!
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360 DEGREE FRESNEL FLASHING WARNING LIGHTS

are most effective for all types of emergency work, both day and night. Style No. 41 mounts on vehicles. Style No. 40 is a portable unit and can be placed wherever required.

Red is standard. Blue, Green or Amber can be furnished.

Write Dept. No. 27 for catalog.

THE PORTABLE LIGHT CO., Inc.

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FOR BETTER FIRE DEFENSE
The DUAL Fire Fighter pump

DUAL FIRE FIGHTER PUMP
MODEL 6201

Fire departments everywhere are enthusiastic in their praise of the **"Dual Fire Fighter"** pump. It has, on numerous occasions, saved property from costly fire damage, bringing fires quickly under control in isolated localities where large truck pumpers could not reach the source of water.

The **"Dual Fire Fighter"** is especially designed for fire fighting equipment. It is used **to relay water** to the truck pumper or it will **fight fires direct.** Mounted on a truck or trailer it is an effective piece of fire fighting equipment for rural volunteer fire departments.

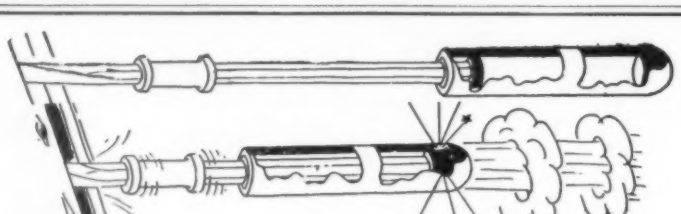
- **As a booster pump** it will deliver 175 g.p.m. through 300 ft. of 2½ in. hose to the top of a hill 50 ft. high.
- **For fighting fire direct** it will throw 100 g.p.m. at 80 lbs. or 80 g.p.m. at 88 lbs. pressure -- Capacity sufficient to supply two 1½ in. lines.
- **It primes in 15 to 30 seconds.** It weighs only 162 lbs. Equipped with carrying handles, easily carried by two men.

Quick action of the **Dual Fire Fighter** may assist **you** in saving costly fire losses.

Ask for Bulletin No. 9-FD-11

The "Dual Fire Fighter" requires very little space on the pumper. Pump is integral with 4 cycle, single cylinder, air cooled engine of 8¼ H.P. Every pump is factory tested before shipping.

THE GORMAN-RUPP COMPANY
MANSFIELD, OHIO



RAM-BAR—Answers your call for a compact and powerful wrecking tool for forcible entry, breaching walls, general demolition.

WRITE FOR LITERATURE.

JOHN F. WARDLAW
8508 Sheridell Avenue, Rivera, California

News of the Manufacturers

(*Continued from page* 512)

ments also employ them in the unspectacular, yet vital, work of preventing explosions and fires caused by combustible gases and vapors.

The unit is easily operated without special training, according to MSA engineers. A squeeze of an aspirator bulb on the portable instrument draws a sample of the atmosphere to be tested into the instrument. A hot wire filament constitutes one arm of a Wheatstone bridge. The gas sample is burned on this filament, the resulting increase in temperature increases the resistance of the amount of unbalance, which is in direct ratio to the concentration of combustible gases or vapors.

Stop-Fire, Inc., Introduces Dry Chemical Extinguisher

The Redi-Flo, a new dry chemical fire extinguisher has been announced by Stop-Fire, Inc., of 125 Ashland Place, Brooklyn, N. Y.

The new Redi-Flo extinguisher featuring Dri-Kem, the moisture proof dry chemical extinguishant, is now being marketed by Stop-Fire, Inc. The extinguisher also has Stop-Fire, Inc.'s features of one hand operation, special locking-release mechanism and highly visible pressure dial.

The new unit contains Dri-Kem, a dry chemical developed after three years of research in the Stop-Fire, Inc., laboratories. The smooth-flowing chemical is obtained by introducing an additive which coats the powder particles and forms a water-resistant skin over each crystal.

The small percentage of ingredients which is added to the extinguishing agent (sodium bicarbonate), permits a greater volume of sodium bicarbonate to be used, thus increasing the fire-killing effectiveness of the unit.

The new Redi-Flo has an added feature of one-hand operation. A newly designed locking mechanism prevents accidental discharge but permits the operator to place the unit in action swiftly with a single release-squeeze motion.

The Redi-Flo is being produced in 3, 5, and 10 lb. units.

New Alfco CO_2 Extinguishers Have Anti-Statik Horn Device

All commercial carbon dioxide fire extinguishers with hose connections now have the Alfco Anti-Statik horns to eliminate shock hazards.

Alfco Anti-Static Horn

The horn is so built that it grounds static electricity, insuring greater safety to the operator. Smaller size units with shorter swivel horns do not require this feature.

A wide range of models are available, from 20 lbs. down to 2½ lbs. Wheeled engines also come in 50, 75 and 100 lb. sizes.

Spalding Heads Eureka's Detroit Office

Stuart J. Spalding, who has been connected with the Detroit, Mich., office of the Eureka Fire Hose Division, United States Rubber Company for the past five years, was recently appointed as Manager of that office. He succeeds A. J. Gilleo, who headed up the Detroit office since 1932.

Stuart J. Spalding

Like his predecessor, Mr. Spalding is actively interested in the various firemanic organizations in his section of the country.

N. B. F. U. Films Available

The Bureau of Communications Research, Inc., the film library of the National Board of Fire Underwriters, has advised that during the Summer its films are readily available for showing by fire departments. There is no charge for film bookings. Send requests for films (and also for a catalog describing the films) to Bureau of Communications Research, 13 East 37th Street, New York 17, N. Y.

Join the Parade to INDIAN

FIRE PUMPS and step out ahead in your fire prevention program!

INDIAN FIRE PUMPS use only clear water — no chemicals. Carrying straps are adjustable so that 5 gal. tank fits the back. It is air-conditioned so that no dampness touches the back.

Now is the time to be sure that you have an ample supply of INDIAN FIRE PUMPS to take care of any fire emergency that may arise. INDIANS are first choice of fire depts., forest rangers, lumbermen, etc. Don't take chances with fire — be prepared with INDIAN FIRE PUMPS.

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–built to individual specifications for nationwide preference

Our specialized methods and plant equipment are geared to the objective of producing the best rescue cars you can find—all built to individual specifications.

No matter where you are located, from the Atlantic to the Pacific coasts, you will find a member of the Gerstenslager nationwide staff of field sales engineers ready to help you obtain exactly the size, type, and general design of vehicle which your safety department needs.

The GERSTENSLAGER Co.

WOOSTER, OHIO *Established 1860*

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WEIGHS ONLY 110 LBS.

MORE EFFECTIVE FIRE PROTECTION

CITY • RURAL • FOREST

MODEL 6600 PUMPER—Instantly Self-Priming—No waiting when seconds count

HIGH PRESSURE—Use one or two hard-hitting streams or fire-blanketing fog-spray

LIGHT WEIGHT—Easily carried to source of water or fire area

NEOPRENE IMPELLERS—Pump dirty water as well as clean water—assure long life

POWER—Efficient 4-cycle, air-cooled 5 HP engine known and serviced world-wide

BY-PASS VALVE, SPRING LOADED GREASE CUP, NO LOSS OF PRIME, PLUS MANY OTHER FEATURES

UP TO 40 GPM AT 150 PSI

MARINE PRODUCTS COMPANY

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Persons in the News

Chief J. F. Van Atta Retires

Chief J. F. Van Atta retired as head of the Kalamazoo Fire Department on July 1, 1952, after 40 years of service, 17 of which he served as fire chief. He is succeeded by Lloyd J. Curry, former assistant fire chief.

The new chief joined the Kalamazoo Fire Department in 1924. He was named assistant chief in 1935. He saw two years of service during World War I.

Chief Curry has many hobbies. He holds a pilot's license and is an experienced airplane pilot. He is an enthusiastic follower of sports.

In announcing Chief Van Atta's retirement, City Manager Elliott said it was with regret that the chief had reached retirement age. Effectiveness of the department in the years to come will always reflect in some way on the grand job Chief Van Atta did, he declared.

New Massachusetts Chiefs

Charles E. Nutting has been elected Chief of the Berlin, Mass., Board of Fire Engineers succeeding Earl Wheeler, who resigned because of pressure of business. Chief Nutting has been a member of the Berlin Fire Department 20 years, the past eight as a member of the Board of Fire Engineers. The department is all volunteer, consisting of 25 men with two 500 G.P.M. pumpers, and protects considerable farm property in the town, which has a population of 2800.

Leonard A. Hardy is now Chief of the Oakham, Mass., Volunteer Fire Department. The organization was formed three years ago.

HENRY T. HANSON.

Paul Schloff Feted in Detroit

Reported to be the largest retirement party ever held in a Detroit firehouse for a retiring member of the Fire Department, the testimonial banquet (given Paul Schloff of Engine 27 made history.

More than 100, including three members of the City's official family, retired chiefs, and other officers and men gathered on May 14th to pay homage to the retiring fire engine operator, who joined the department in 1909 and has a 43 year service record. He started as a substitute in Engine 1; trial cadet in Ladder 2; was confirmed at Engine 2 and, in 1913, was transferred to Engine 27, then a horse drawn company. He is said never to have been late in his entire career.

ED DAMASCHKE.

Hudson Valley Firemen Name New Heads

Bennet D. Feller, of Red Hook, N. Y., was elected president of the Hudson Valley Volunteer Firemen's Association at its 63rd annual convention, June 20th. Others elected were: Peter W. Carrie of Hastings-on-Hudson, first vice-president; Anthony Dilissio of Haverstraw, second vice-president; Charles Fales of Haverstraw, re-elected secretary, and George Sweet of Coxsackie, re-elected treasurer.

Fowler Heads N.B.F.U. Codes Division

The National Board of Fire Underwriters, New York, N. Y., on June 24 announced the appointment of Everett W. Fowler of Scarsdale, N. Y., as director of its newly-created division of codes and standards.

The new division, along with the research division, falls within the framework of the engineering department, Lewis A. Vincent, general manager of the NBFU, explained in making the announcement. He said it will co-relate the work being done on NBFU's National Building Code, Suggested Fire Prevention Ordinance, Standards for the Installation of Automatic Sprinkler Systems, as well as its many other published standards, of which several million copies are distributed annually. Some 500 cities throughout the country now use NBFU's Building Code and its Suggested Fire Prevention Ordinance, or one based on it, has been adopted by some 200 cities.

Obituaries

G. R. Evans, Township Chief

Glenn R. Evans, 57, Chief of the Austintown Township (Ohio) Fire Department died April 4th, last. He became head of the department in 1943 and resided at the Austintown fire station. He was a member of the Ohio State Association of Fire Chiefs.

Chief Dane Chambers

Fire Chief Dane Chambers of the Chambers Lodge, Calif., Fire Department, died on May 16, 1952, and was buried at Santa Barbara, Calif., with full Masonic honors. He was widely known among Pacific Coast fire fighters.

Chief Chambers (the community of Chambers Lodge was named after him), was a member of the International Association of Fire Chiefs, the Pacific Coast Inter-Mountain Association of Fire Chiefs, the Northern California Fire Chiefs Association, the California Rural Fire Association, the California State Firemen's Association and the Lake Tahoe Fire Chiefs and Firemen's Association. He was also an officer in the Coast Guard Reserve, the Rotary Club, Chamber of Commerce and the Masonic Order. In addition to owning two large hotels in Santa Barbara and one in Los Angeles he was the owner of one of the fastest motor boats on Lake Tahoe.

VICTOR BARTLEY.

May Fire Losses

Estimated fire losses in the United States during May were $62,354,000, it was announced by Lewis A. Vincent, general manager of the National Board of Fire Underwriters.

This is an increase of 6.1 per cent over losses of $58,744,000 reported for May, 1951 and a decrease of 7.5 per cent from losses of $67,380,000 for April, 1952.

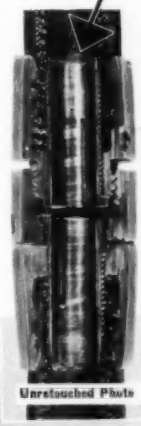
Losses for the first five months of 1952 now total $346,068,000, an increase of 4.5 per cent over the first five months of 1951 which totalled $331,038,000.

These estimated losses under fire insurance policies include an allowance for uninsured and unreported losses.

AIR PORT FIRE FIGHTERS SPECIFY BAR-WAY COUPLINGS

For booster and high pressure fog lines

There are four good reasons why the fire fighters specify BAR-WAY couplings. Four reasons why BAR-WAY couplings are growing in favour with firemen, hydraulic engineers and others who insist on the best.



→ **SAFETY**—The coupling becomes the *strongest part of the hose line.* Tested to 3000 pounds pressure and 500 pounds pull.

→ **FULL FLOW**—No suppression of flow in coupling. No shrinkage of hose at coupling.

→ **FLEXIBILITY**—Reels smoother. Easily replaced. Nothing to catch on corners or underbrush.

→ **BETTER MADE**—Accurately machined, always the same, interchangeable. WILL NOT FAIL.

Send for our free pamphlet. Gives detailed specifications for all types of pressure hose.

BAR-WAY MFG. CO.
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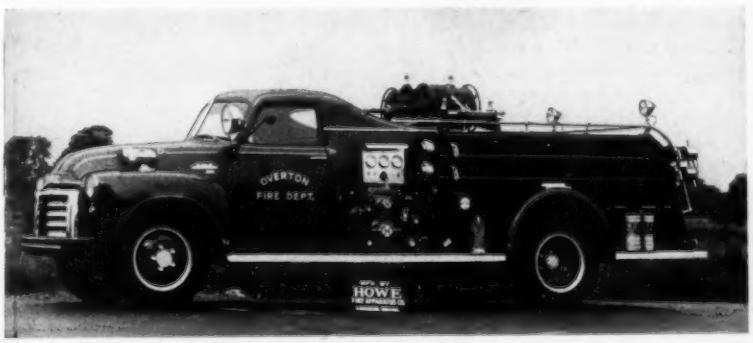
WEST COAST REPRESENTATIVE } **W. D. RIGDON, 383 Brannan Street, San Francisco 7, Calif.**

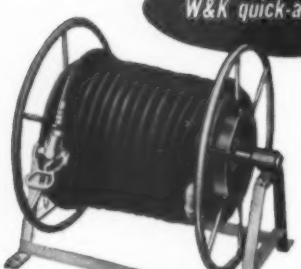


HOWE Fire Truck Equipment Meeting Every Service Since 1872
Centrifugal, Rotary and Piston Pumps Supplied
HOWE FIRE APPARATUS CO., 1402 W. 22nd St., Anderson, Indiana

Wirt and Knox Continuous Flow Hose Reels are specifically designed for fire service, are sturdy and durable to provide long life. Complete range of sizes available.

WATER AT THE NOZZLE INSTANTLY!

W&K quick-acting, one man hose reels are always ready!



You can fight fires immediately and keep water damage to a minimum by using Wirt & Knox Continuous Flow Hose Reels.

Here are the advantages these reels provide:

1 **INSTANT ACTION** Water pressure is available at the nozzle even when hose is coiled on the reel. There is no need to run back to turn on valve.

2 **NO WAITING FOR WATER** A full stream of water is maintained when you are unreeling the hose and advance toward the fire. A swivel joint permits uninterrupted flow while reel is revolving.

3 **ELIMINATES KINKS AND TANGLES** You unreel only enough hose to go directly to the fire. No time is lost for straightening out kinks and tangles.

4 **UNIVERSAL MOUNTING** The hose reel with universal mounting stand can be easily installed on walls, columns, ceilings, floors.

WRITE OR CALL for complete details and illustrated folder.
WIRT & KNOX MFG. COMPANY
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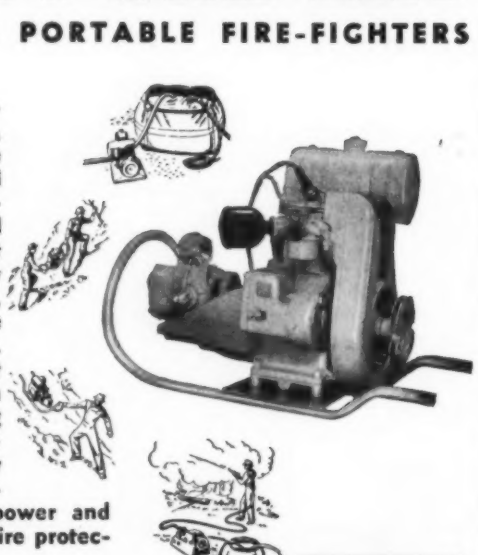
WIRT & KNOX FIRE FIGHTING EQUIPMENT

PACIFIC PUMPERS

AMERICA'S NO. 1 PORTABLE FIRE-FIGHTERS

The sure-starting WA-7, newest of the famous Pacific Pumpers and already an outstanding success in both private and public forest use, is light enough to be carried by hand to source of water, booster tank location, or fire area. It delivers 22 g.p.m. at 50 p.s.i. or 14 g.p.m. at 300 p.s.i., throws a high pressure fog for smothering tactics. Self-priming, positive displacement rotary pump, driven by 4-cycle air-cooled engine, gives you power and portability that mean real fire protection over a wide area.



Write for data on complete line of Pacific Pumpers, hose, accessories.

PACIFIC MARINE SUPPLY CO.
SEATTLE 1, WASHINGTON
FIRE EQUIPMENT DIVISION

Among the Buffs

By Paul C. Ditzel

I'VE been awaiting word from the boys of Philadelphia's Box 476 Club on the outcome of demon writer Jack Robrecht. Seems as though Jack has taken to chasing too many fire engines: at last count he had just returned to quarters from responding to a worker in a two-story brick residence. Jack tallies his runs and says that this one was his 33rd of the year and figures he's sure to set some sort of a record for himself this year.

But that ain't the point! Brother Jack has been visiting area fire departments and, unless I'm mistaken, it sounds as though he's become color blind. At Norristown, Pa., Jack and his pals visited the Montgomery Hose Co. There they saw the only two dark blue fire rigs they had ever seen. The paid driver at the station, James Granger, gave them a "swell reception" writes Jack.

Then Jack walks into the Washington Hose Co. at Conshohocken, Pa. The equipment there was all American LaFrance and painted a golden yellow. Driver Stemple at that station showed the 476'ers around the fire station's rooms.

"It was like the interior of one of those plushy millionaire clubs. Carpets that you sink into up to your ankles, rich mahogany paneling, and 20 foot high ceilings with beautiful crystal chandeliers and huge framed photographs of the company," writes Jack. Driver Stemple also showed them a picture of a 1914 American LaFrance 750 gallon pumper with three generations of Stemple's family aboard: his father, himself driving, and his son who also is a driver. Quite a record!

Brother Robrecht says Conshohocken's Washington Hose Co. has painted its apparatus yellow since 1898 when they changed from green to yellow. Easy, Jack!

Robrecht, who lives at 5113 Willows Ave., Philadelphia 43, Pa., says the Harrisburg, Pa., brigade is the next one on the schedule. Wonder what color they'll be, Jack?

In Philadelphia, Jack marvels at some of the changes in operations since a new chief, George Hink, and a new commissioner, Frank McNamee, took office.

"Since our new Chief Hink took over in March, he has had the boys use the mounted deck pipes for a change. Chief Hink believes in the use of big heavy streams on a large fire, and lots of manpower. In other words, pull extra alarms. Hit the fire hard, knock it out quick, and then everybody goes home," says Jack.

He writes that a new term has been added to Philadelphia Firehouse lingo. It's "Hink Special." That's a three alarm fire. Jack says the firemen tell him they like Hink's new system.

"Hink told the battalion and deputy chiefs that previous instructions and practices to the contrary were out, that from here on he will never condemn a chief for pulling extra alarms if he thinks he needs them. But, God help the chief that needs help and fails to pull the extra alarm. That Hink is a real man and a darn good fireman, too," says Jack.

The new boss, Commissioner Mc-

mee has started a new TV program out the Philadelphia Fire Department ery Monday at 12:30 p.m. for 15 min-es. Purpose of the program is to edu-e the public with problems, training d operations of the Philadelphia De-rtment.

Jack says that from Friday, May 16, Wednesday, May 21, Philadelphia d six multiple alarm fires. He took in o of them. One was a three-bagger a marine and hardware supply com-ny in South Philadelphia and the her was a five alarmer in three build-gs in North Philadelphia.

Speaking of fire business, I can't let e opportunity pass to get in a plug for e work of my former home depart-ent: Chicago. My ace correspondent ere, Captain Willard Swanson, for-erly of Rescue Squad 8, says Chicago d 10 extra alarm fires in the first 13 ys of June. During the same period ne year ago, the city went 35 days ithout so much as a 2-11.

"The weather has been very hot and umid, temperatures in the nineties and hat may account for some of it," Swan-e writes.

Chicago had a 5-11 in a warehouse on North Winchester Street. A wall col-apsed at the fire and buried 18 firemen. One of them died several days after. econd Deputy Tom Powers also got urt in the collapse. The following fternoon Chicago had a 4-11 in another aper warehouse at 14th and Racine. Chief Brennan of the 8th Battalion roke his ankle at that one.

Chicago also responded with a 5-11 assignment to suburban Stickney for a hemical plant job. Many of you buffs robably saw a picture of the fire cloud which was serviced over the wirephoto etwork of the Associated Press. The oys had a tank of lacquer with 12,000 gallons of the stuff in it. When that et go, they really had a time for them-selves. There was a 28 minute wait between the box and the 2-11 but there was no delay after that. The registers didn't stop chattering until the 5-11 was in.

Captain Swanson, currently assigned o the Fireboat Busse, soon will be-come a battalion chief. He placed 11th on the new chief's list so let's hope he gets his new big red buggy before the year's out.

James P. Pruntz of Engine 54, on W. 47th St., Borough of Manhattan, New York, says the U. S. Air Force is THE place for buffs who want to become fire-men when they join the service.

"The Air Force is a clean life," says Jim. "While in basic training I took a test for firefighter and passed. Because of being a buff and knowing so much about fire fighting, I skipped the grade of firemen's helper and became an ap-prentice fireman. That meant I was put right on the job as firefighter."

Jim says a fellow buff of his, Ray Flood of Hook and Ladder 116 on 29th Street, Borough of Queens, N. Y., is trying for firefighter in the U. S. Coast Guard Reserve.

Up in Minneapolis, Deputy Chief Tom M. Edwards of the Box 35 Asso-ciation, 4247 Cedar, sends along a Minneapolis Star clipping showing the new emergency truck to be manned by volunteer Hennepin County Sheriff's deputies, most of them members of Box 35.

Box 35 is a group of Twin Cities (St. Paul and Minneapolis or the other way around depending upon which city you live in!) residents who have voluntarily

POWHATAN

SINGLE AND DOUBLE HYDRANT GATE VALVES

are the best your money can buy!

PLATE 116

We sincerely believe that the money spent by a fire department should buy only the very best equipment possible. Since 1892 we have striven to produce only the best precision tooled and strongly built brass Fire Fighting Equipment that can be manufactured.

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PLATE 105

The number of repeat orders from Fire Departments all over the country have proven the value of this policy maintained by Powhatan Products.

The experience we have gained over these many years, plus the engineering skill we are able to marshal, makes Powhatan eminently able to take care of any requirements you may have.

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provides a blanket of fog for small hazardous fires

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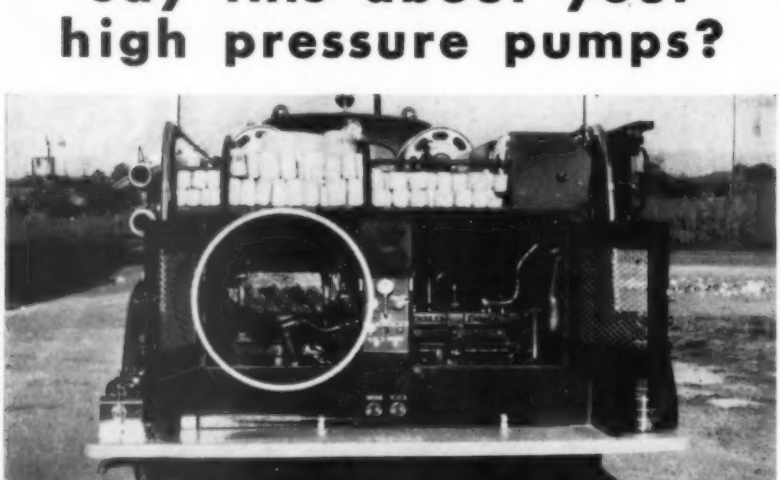
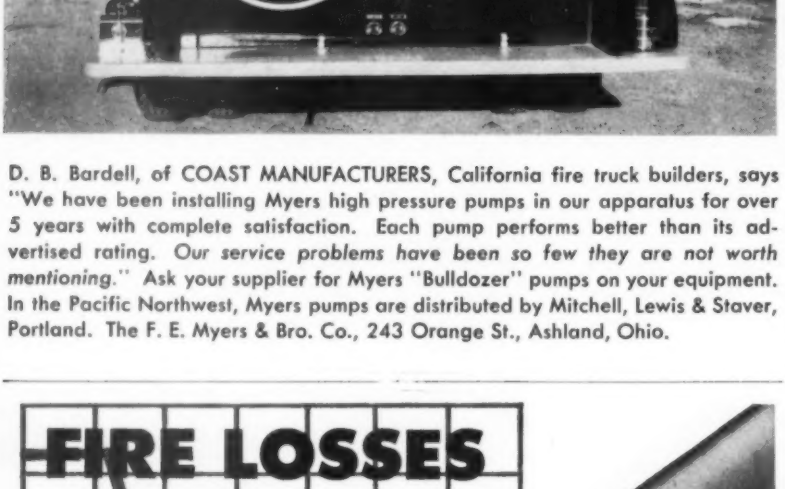


D. B. Bardell, of COAST MANUFACTURERS, California fire truck builders, says "We have been installing Myers high pressure pumps in our apparatus for over 5 years with complete satisfaction. Each pump performs better than its advertised rating. *Our service problems have been so few they are not worth mentioning.*" Ask your supplier for Myers "Bulldozer" pumps on your equipment. In the Pacific Northwest, Myers pumps are distributed by Mitchell, Lewis & Staver, Portland. The F. E. Myers & Bro. Co., 243 Orange St., Ashland, Ohio.



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Speed does it! Fulton Shuredy Salvage Covers are designed for fastest handling by your salvage crew. They are light, pliable and spread quickly and easily.

Pressure impregnated with the exclusive Fulton dry treatment, Shuredry Salvage Covers top every test for water penetration and seepage.

APPROVED by National Board of Fire Underwriters, and by Factory Mutual Laboratories.

You can *depend* on Shuredry to cut down fire losses! Specify FULTON SHUREDRY GREENBAK SALVAGE COVERS, from your fire equipment dealer.

Fulton **BAG & COTTON MILLS**

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New Orleans • Los Angeles • New York City • Winter Haven, Florida

responded to fires since 1935 to assist firemen and police. The clipping says the idea for the emergency truck came from Box 35.

The truck, valued at $10,000, has a floodlight plant, a portable oxyacetylene unit, two-way radio, resuscitator, first aid equipment and a carrying capacity of 10 persons. It also can be used as an ambulance in an emergency.

That's it for this month, buffs. The address is the same again: Associated Press, P. O. Box 2416, Terminal Annex, Los Angles 54, Calif. Send in your fire anecdotes.

With Our Readers

North Bay Tragedy, and "Orphan Areas"

The fire in the Township of Widdifield, adjacent to the City of North Bay, Ontario, on June 16th, which is referred to in the editorial in this issue of FIRE ENGINEERING, provoked many inquiries to the staff of this Journal.

In order to bring our readers the full story, the two men most capable of providing those facts, and at the same time relating them to the conditions concerning "orphan territory" in the Dominion of Canada, were asked for such information as they cared to provide. They are Fire Chief G. R. Thomas of North Bay, and William J. Scott, Fire Marshal of the Province of Ontario.

With some deletions, the communications of these authorities are given below:

To the Editor:

The incident referred to in your letter happened on the morning of June 16th, at 6:50 A.M. It (the incident) was in the Township of Widdifield, adjacent to the City of North Bay.

We have an agreement with this particular Township to give them Fire Protection under certain conditions. One of the conditions is that when we answer calls to this particular municipality, we must be called by some person in authority from that particular municipality and that this person give a Code number when calling. If the Code number is not given, we do not respond to the call. The reason for this being that if we answered every call we received we would be running all the time to rubbish, grass, and chimney fires.

There are certain officials of the municipality designated to authorize this department to answer calls in an emergency, and the Township residents must first contact these officials, before we can respond.

The information brought out at the inquest was that a boy of 15 years old had left the house for work at 6:30 A.M., and when he left the house the rest of the family were still in bed, with no fire in the house. At 6:50 A.M. some of the neighbors noticed the house enveloped in flames from ground to roof. They tried to enter the burning building but were unable to do so, with the result that the father and six children were burned to death. Their names are as follows: Frederick Thibeault, 40; Gerald, 16; Rene, 11; Lynn, 7; John, 6; Patrick, 4 and Betty, aged 2½. The mother and one child are still in the hospital (June 23rd) in very serious condition. One child was released from the hospital the latter part of last week.

The house was of frame construction,

ered on the outside with tar-paper. e father was a trucker and kept a antity of motor oil stored in the back d. It is presumed he also had gaso- e stored there as well, in 5-gal. con- ners. This is information picked up m neighbors, but it is by no means thentic. However, several tins of otor oil were found in the debris of e burned building, and one 5-gal. can as found, but what the contents were, the moment we are not able to say. was sent to Toronto for laboratory sts. . . . The fire was investigated by Inspector from the Fire Marshal's epartment but as yet no cause can be und for the tragedy or the fire itself.

G. R. THOMAS, Chief
North Bay Fire Department

---

o the Editor:

In reply to your request for com- ents on the recent situation at North ay where the North Bay Fire Depart- ent followed municipal rules and did ot answer a fire call to a suburban ome which was on fire, and in which everal lives were lost, may I say that in y opinion under the conditions which xisted there, both the City Council of North Bay and the North Bay Fire De- artment followed the proper procedure.

This was not a case of unnecessary unicipal red tape preventing a fire de- artment answering a call promptly. It was an example of a fundamental prob- em of whether, on moral grounds, the itizens of one municipality should de- prive themselves of fire protection, for which they are paying, to give free fire protection for citizens of another muni- cipality whose elected representatives have formally decided they are willing to pay for the services of the fire de- partment only under special conditions.

In Ontario, all fire departments are supported at the expense of the muni- cipal taxpayer, subject to provincial grants under the Fire Department Act which is administered by the Ontario Fire Marshal's Office. We have 50 paid fire departments in the province and just under 400 volunteer fire departments which operate on municipal budgets, which provide for the maintenance costs of the fire department and purchases of equipment and also provide a small honorarium for the volunteer firemen. We do not have in Ontario the system of volunteer fire departments outside of municipal control which is prevalent in the United States, where the fire de- partment is composed of a group of men who raise their own funds by various means and purchase the apparatus and fire halls with these private funds, and operate the fire department without cost to the local taxpayer.

Under our circumstances here, for nearly 20 years it has been a definite policy in the Ontario Fire Marshal's Office, and the subject of repeated recommendations to local fire chiefs and to local municipal councils, that the taxpayers in their home municipalities should not be asked to provide free fire protection for citizens of other muni- cipalities. We encourage systems of mutual aid between municipalities hav- ing fire departments, and I have never known of an instance where any fire chief in Ontario has failed to answer a call for help from a brother fire chief. But the case of a municipality having no fire department is on a distinctly differ- ent footing, and our belief is that no one should be asked to provide fire pro- tection for such a municipality without

(*Continued on page* 541)

Chief—Here's How You Can Be a "*Hero*" to Your Community as Well as to Your Kids!

You already are a hero to your own kids—if you have any—and to the other youngsters in your community.

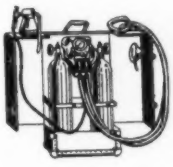
But when you or one of your men saves a life beyond the call of duty—in cases of drownings, smoke suffocation and the like—you really endear yourself to your community.

Over three thousand Fire Chiefs have learned that automatic resuscitation saves more lives.

Hundreds of Fire Chiefs, after thorough examination and from personal experience, know that the Stephenson Resuscitator is more effective than any other.

Protect Your Community.

Enhance Your Department's Good Will.



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or write direct for information or demonstration.

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Represented in Canada by SAFETY SUPPLY COMPANY, Toronto

HALE Type FZZ

Fine for Relaying to Major Pumper

The Hale Type FZZ portable fire pumping unit pictured at right can be easily carried by two men to source of water which truck cannot reach, for refilling booster tank or for fighting fire direct. Unit is also available mounted on two truck-type wheels or on rubber-cushioned steel channels.

Capacity of FZZ is 60 G.P.M. at 90 lbs. pressure; 150 G.P.M. at 30 lbs. pressure. Provides two capable fire streams through 1½-inch hose lines, using ½-inch nozzles. Note: Discharge Adapter can be supplied for use with 2½-inch fire hose.

Ask for Demonstration; No Obligation
Write Today for FZZ Folder to:

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FIRE PUMPS IN ALL STANDARD CAPACITIES

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216 E. 45th Street, New York 17, N. Y.

The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

RADIO PROGRESS IN THE FIRE SERVICE

THE discussion in this Round Table is a continuation of that which appeared in the May and June issues on the use of radio in fire departments.

The generous response from our readers made it necessary to carry the discussion over to this issue.

Readers are invited to send in their comments on this subject or on next month's subject which is described in a box on a following page. Address replies to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Question

C. N. Penn, Chief, Dallas, Tex.: Two way radio is used extensively in our Fire Department; 95% of our fire fighting apparatus is now so equipped. In the near future we expect to be fully equipped.

A "turn-around," in service system is used lowering possibility of accidents and also puts companies back in service with a minimum of time out of service. As we have an enormous amount of grass fires each year, the radio enables us to utilize outlying companies to the fullest extent and saves other equipment from having to make exceptionally long runs.

At the present time, we have to use the same frequency as the Police Department and utilities. This necessarily causes some delay and confusion at times in communication with our equipment.

The Fire Prevention Bureau has several cars equipped with 2-way radios, which enable them to handle complaints of a hazardous nature with promptness. This alone improves public relations, as the complainant feels he is getting immediate, personal attention to his individual problem, and in addition has enabled us to alleviate hazardous conditions before an extreme emergency arose.

Max Wiggins, Chief, East Point, Ga.: All our apparatus was equipped with two-way radio in 1946. We use it in a "turn-around" system. In 1951 one piece of apparatus answered five alarms before returning to headquarters.

In our department walkie-talkie radios would help greatly at fires in large buildings.

In most average departments radio equipped apparatus along with walkie-talkies would, I feel sure, permit more full company inspections of all buildings in their territory.

We use the radio to report back to headquarters immediately on arrival at the scene of the alarm. Thi has given us a lot of publicity.

C. F. Krambeck, Chief., Dodge City Kans.: Seventy-five per cent of ou vehicles are equipped with three-wa radio. We hope ultimately to be 10 per cent equipped.

Radio is used in a "turn-around system.

We use on-duty men with radi equipped apparatus both for inspectio work and fire prevention.

By demonstrating the use of radi equipment at fire prevent activities we let the public know how radio im proves the service our department i able to give them. We also demon strate the use of our radio to bo and girl scout troops and at the differ ent schools throughout the city. Sinc following this practice we have re ceived comment from the public stat ing they did not realize the many ad vantages the radio equipment in ou trucks gave us.

W. B. Salyers, Chief, Covington, Ky. About seventy per cent of our ap paratus is equipped with two-wa radio, and we hope to soon be 10 per cent equipped.

We use radio in a "turn-around system when the equipment is return ing and has not been stripped at th previous call.

Where sections of the country hav

HERE IS THE QUESTION

1. **Do you use 2-way radio in your department? If so, what percentage of your vehicles are equipped for 2-way or 3-way conversations? If not fully equipped at present, do you expect to ultimately be 100 per cent radio equipped?**
2. **Do you use radio in a "turn-around" system to save mileage and attendant lowering of accidents, operating costs, etc., of your motorized equipment?**
3. **Have you any suggestions to broaden and improve fire department use of modern short-wave radio:**
   - **(a) In fire control and extinguishment?**
   - **(b) In fire prevention (inspections, etc.)?**
   - **(c) In improving public relations?**

a mutual organization to assist one another on multiple alarms or more calls at one time than they can handle, I would suggest that the organization maintain a master two-way radio station. Each fire station and the equipment should be equipped with a two-way unit. This would also facilitate faster cooperation in civil defense of target areas.

I would like to see each transmitter and station receiver equipped with a gasoline or other fuel type generator in case of failure of current supply to transmitter.

I would also suggest that all fire alarms be transmitted by radio to all units and stations in the cities or districts. This would supplement box, teletype and telephone alarms.

Fred Pimental, Chief, Albany, Calif.: We use two-way radio with our own transmitter but using the police frequency. This facilitates better operation at fires between the two departments. Our equipment is 100% radio controlled.

We do not use the "turn-around" system as we believe there is too large a margin for error. All equipment responds to the location involved regardless if a cancellation occurs.

In fire control and extinguishment we have experimented with handie-talkies and are contemplating adding these to our regular fire control methods. Its use has proved to our satisfaction that it is a definite step forward in modern fire fighting.

In fire prevention work we use a one-quarter-ton pick-up truck (red car) which being radio equipped is in constant contact with headquarters. In this way members from the station can take part in regular inspections and still be able to respond to an alarm.

W. J. Taylor, Chief, Burbank, Cal.: We are one per cent equipped with three-way radio.

We use it in a "turn-around" system.

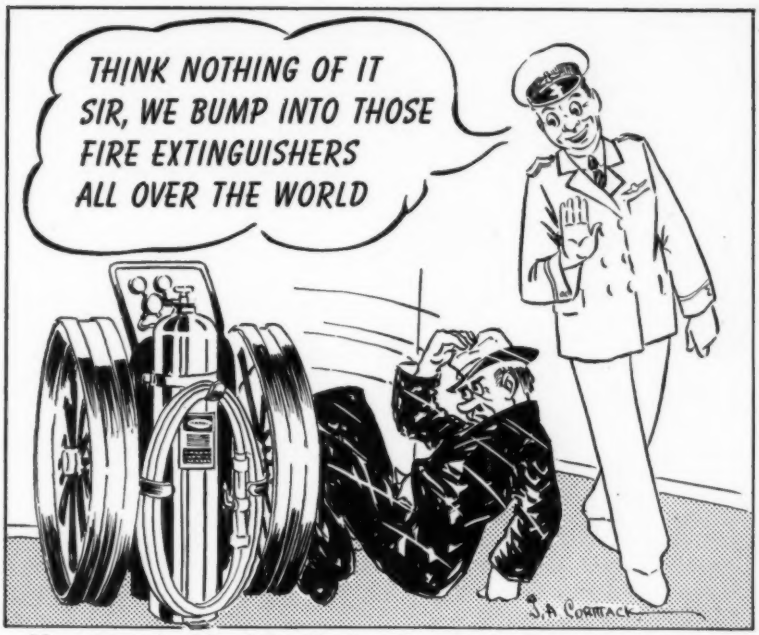
Radio has become the strong right arm of the fire service. I find it difficult to imagine how we used to get along without it. Equipment and manpower can be effectively controlled by its use. Handie-talkies have been proven very worthwhile in our mountain brush covered area as well as in large industrial plants.

Fire prevention work is made possible through its use on the company level, thereby increasing the productive time of firemen. Hydrant maintenance is also accomplished through the use of radio.

Using radio in the foregoing activities is bound to improve public relations.

Abel S. Eldridge, Chief, Newport, R. I.: We have two-way radio in the chief and deputy chief's cars, also in the rescue car. Our radio is handled entirely by the police department and we are on the police F. M. wave length. Our radio can be used for three-way conversations, and we hope eventually to have radio on each piece of apparatus. We do use radio in "turn-around" system, and my department is joining with the rest of Newport County and the local Navy fire departments which will tie us all in on one wave length.

Charles L. Slade, Chief, Des Moines, Ia.: We use three-way radio on all apparatus including chiefs cars and rescue rigs. We operate our own



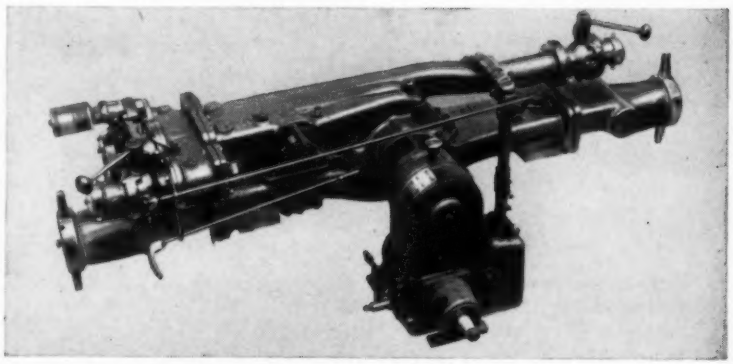
Many thousands of Ansul Dry Chemical Fire Extinguishers are exported each year. They may be found in oil fields of Central and South America, in gold mines of South Africa, in the Arctic wastes of Iceland, Northern Canada and Alaska and even in the tropical paradises of the Dutch East Indies. In addition, airports all over the world use Ansul Equipment to protect lives and property against loss by fire.

It all goes to prove that the word gets around concerning the greater Fire-fighting effectiveness of Ansul Dry Chemical Fire Extinguishing Equipment.

SEE PAGE 515

For Flexible Performance

Specify HALE



Flexibility of Performance (adjustability to a wide range of fire-fighting conditions) is a notable characteristic of the Hale series of multi-service Centrifugal Fire Pumps operated in Series for pressure . . . and in Parallel for volume.

Built in all standard capacities, they are highly efficient and dependable pumps designed for use with modern engines.

Make sure of the same flexibility and dependability in your next piece of apparatus by insisting on a Hale Fire Pump.

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STERLING SIRENS

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- RUGGED
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MODEL M GENERAL FIRE ALARM SIREN for Volunteer Systems

Quick acceleration, power-plus . . . Model M really gets the boys out in a hurry! Used by championship companies from coast to coast. A dependable, heavy-duty siren built of the finest materials throughout.

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58 ALLEN ST., ROCHESTER 6, N.Y.

HERE IS THE TOPIC FOR THE NEXT ISSUE

1. Do you maintain a power boat (or boats) in your fire department for emergencies?
2. For what purposes is the boat (or boats) employed?
3. Is the boat (or boats) powered by inboard or outboard motor?
4. Have you found it a useful piece of equipment?
5. If you do not at present maintain a boat (or boats), do you believe it would be a useful addition to your equipment? In what way?

central transmitter since divorcing the police.

We feel our biggest saving dollar wise is on "turn around" and "more equipment available."

Complete communication with all companies at all times makes directing operations on the fire more simple and saves leg work by expediting the movement of various units.

Radio has permitted us to multiply our company inspections many times and still have apparatus in service (thanks to Chief William Fitzgerald of Seattle for paving the way).

There are no doubt many ways radio can be used to further public relations.

Clyde L. Peterson, Chief, Ogden, Utah: Our department is one hundred per cent equipped with three-way radio. This includes all chief officers cars, fire prevention cars, electricians trucks, salvage unit, pumpers, reserve pumpers and aerial ladder. We also have two walkie-talkie units.

We use our radio in a "turn-around" system to save mileage and help lower our operating cost; also to help minimize accidents and to insure the maximum efficiency of the department in giving service.

We have our own radio technician to install and maintain our units. This assures us proper maintenance of the equipment, and immediate repair service in case of trouble.

The only suggestion I can offer to broaden and improve fire department use of radio as we have it, is to teach and educate our officers to use it more in giving instructions and orders to their men. With radio the officers and companies are available one hundred per cent of the time for their emergency calls while taking care of special assignments, thereby increasing our output of work fifty per cent.

Joseph Waterman, Chief, Toronto, Ont.: Thirty per cent of our apparatus is equipped with three-way radio. We use radio in a "turn-around" system to very good advantage.

Our public address system is linked with mobile unit on all staff cars of fire fighting division, of which we have one car equipped. We found this to be of great value in transmitting orders at a large fire.

In fire prevention work and inspections we believe the use of walkie-talkies linked up with the P. A. sys-

tem would be helpful.

Demonstrating to industry and public gatherings how the use of modern short wave radio in fire fighting improves efficiency and lowers operating costs improves public relations.

E. H. Kline, Chief, Columbus, Ind.: Three units are equipped for three-way conversation and two sets are to be delivered and installed soon.

We hope to ultimately be one hundred per cent equipped.

We use radio in a "turn-around" system.

Karl L. Evans, Chief, Reno, Nev.: Fifty per cent of our apparatus is equipped with radio. We ultimately hope to become fully equipped.

We use it in a "turn-around" system to save mileage and operating costs and to lower accidents.

At present we are endeavoring to obtain a fire department frequency exclusively for the use of three-way system. We believe that three-way radio will increase our efficiency insofar as the radio is concerned about 75 per cent. At present we are workink with a two-way system in connection with the police department.

J. C. Sievert, Chief, Phoenix, Ariz.: We are one hundred per cent equipped with three-way radio.

We use it in a "turn-around" operation.

When police and fire departments are on the same radio frequency, the fire alarm is broadcast. The broadcast is connected to the loudspeaker system in the fire stations. This procedure dispatches the fire engines and notifies the police in one operation.

Fire engines are also equipped with a public address system. The new loudspeakers are mounted on a swivel.

G. R. McAlpine, Chief, Oklahoma City, Okla.: We are 100% covered by two-way radio in this department.

We do use radio for turning fire equipment back when it is not needed. This operation is handled by the chief officer on the fire grounds if, in his judgment, certain fire equipment that responds is not needed. This over a period of time reduces the miles run to fires and reduces the over-all cost of operations. It lessens the possibility of accidents to a large degree and places the equipment that is not needed back in service and eliminates time out of service, which, in turn, reduces miles run to fires by second-due equipment in districts uncovered by a first alarm response.

As we use the radio for fire department operations, I can see great possibilities in expanding its use.

In fire control and extinguishment it is possible and a general practice for chief officers to direct incoming engines to different locations and direct the number of hose lines to be laid. This is important and is accomplished by talking to company officers as they approach the fire area. It eliminates giving the specific order after the company has arrived, thereby saving time. Trucks and squads are also directed as to location and operation in some instances before they reach the fire ground.

As a matter of fact, engines in this department keep their two-way radios in operation while pumping and orders are given to raise or lower pressures.

When fires involve large areas you can communicate with fire officers around the fire and move equipment

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THE GLOBE has maintained its leadership through constant research and improvement. Latest example of this are the GLOBE Neoprene* Interlinings. More resistant to chemicals and aging than rubber, this absolutely waterproof interlining will not stiffen at below zero temperatures or soften in extreme heat. One more reason why YOU should buy GLOBE, the suit preferred by firefighters everywhere.

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The MEMCO AERIAL LADDER is an economical all-metal ladder unit designed to be installed on existing truck or to be installed on new equipment by your fire truck manufacturer. Electrically raised and lowered by power from the truck battery.

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1007 N. W. 36th Street
Oklahoma City 3, Okla.

from one location to another quickly by the use of radio.

Fire officers can receive valuable information from fire alarm operators while en route to the fire, as to the location, the number of calls received reporting the fire, etc. It is helpful when responding to a fire to get in advance to your arriving the information that the fire is reported to be in the basement, or on the ninth floor. It is helpful to know what building is involved before you arrive.

The Oklahoma City Fire Department makes use of two-way radio for fire inspections. Engines dispatched on a fire inspection never go out of service. In case of fire in their district, they confirm the alarm and respond to the fire without loss of time and without delay.

We believe that the two-way radio makes it possible for the entire fire company to observe the various buildings in their respective districts, so when called to a fire the men are more familiar with the building and surroundings. While making such inspections the fire company has the opportunity to check the location of fire hydrants, fire escapes, entrances to basement sections of buildings and many other things of general interest that make fire company operations more efficient.

Two-way radio makes it possible for district fire chiefs to inspect their various fire stations and to make any other inspections he may desire to make and yet keep in direct touch with the department at all times. This gives chief officers the opportunity to visit with their companies and pass on information that will be helpful to the companies in carrying out their jobs. Public relations can be helped by the use of two-way radio. We practice in this department prompt response, dealing with matters that we consider our responsibility. All fire departments practice prompt response to fires. This is second nature with firemen, but in the case of a complaint we dispatch fire inspectors by radio. We receive many nice comments for prompt response to such things as smoke in the neighborhood, a cat in a tree, a dog under the house, a skunk in the attic, etc.

I would not be without two-way radio in the Oklahoma City Fire Department. It prevents sleepless nights by quick and efficient communication.

Frank S. Sandeman, Chief, Long Beach, Cal.: All chief officers' cars, pumpers, ladder trucks, squads, ambulances and the alarm bureau truck are equipped with 2-way which can be used 3-way within limitations of 2 miles. All chief officers' cars also equipped with walkie-talkie.

All walkie-talkies in our department are on the same frequency; therefore, we can talk direct with dispatchers or mobile unit, whichever is required. This is particularly advantageous for major disaster use and for operation inside multiple story buildings.

This department has used radio in connection with fire prevention inspections since 1948. An entire company may go out on a fire problem inspection and remain in service.

When an inspection is being made, signs are placed on the pumpers, etc., indicating what is taking place and that the apparatus is still in service via 2-way radio.

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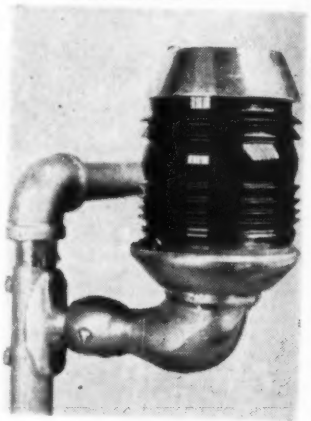

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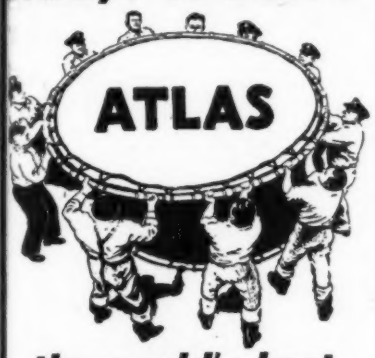

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Janesville APPAREL CO.
JANESVILLE, WISCONSIN

With Our Readers

(*Continued from page* 535)

the cost of such fire protection being paid by the municipality wanting and getting the service.

While some fire insurance interests have objected to urban fire apparatus leaving the city, this objection has not been to the extent of any increase in the city fire rates. In any event, this objection is not serious if the fire department is modernized and uses short-wave radio by which its apparatus could be recalled in some case of need.

We have done a great deal to facilitate the organizing of new fire departments to provide fire protection for municipalities that do not now have it. To aid new fire departments, the Province is prepared to pay 35% of the cost of the first fire pumper and 25% of subsequent capital and operating costs for everything except the fire hall (fire station) and the waterworks system, which are aided by another branch of the provincial government.

Where the suburban or rural municipality does not want to organize its own fire department, our laws have been amended at various times to facilitate hiring fire protection from a neighbor, in the following regards:

(a) Every municipality having a fire department is authorized, under the Municipal Act to enter into an agreement to provide fire protection for any nearby municipality and also for industry and private premises outside the municipality's jurisdiction.

(b) The authority of the fire chief to make inspections and to order remedial fire prevention measures is automatically extended to include all outside municipalities and premises included in such agreement.

(c) Our Workmen's Compensation laws have been amended to automatically include compensation for both paid and vounteer firemen, wherever they may be called upon to go in the line of duty, whether within or outside the municipal limits, and the municipalities urged to take out their automobile insurance on the same basis.

(d) For the suburban or rural municipality hiring its fire protection from a nearby municipal fire department, the Province of Ontario pays 25% of the cost of such hiring by way of grants made to the suburban or rural township, such a hire agreement being taken as the equivalent to having its own fire department insofar as being eligible for subsidies under the Fire Departments Act.

All of our municipalities without municipal fire departments have been circularized repeatedly, urging them to either organize their own fire protection or else hire it from a nearby municipal brigade; and the assistance the Province of Ontario gives to this has been outlined to them in detail many times. If, despite this, the township does not want to charge the township taxpayers for any fire protection costs, and refuses to enter into a proper agreement, then, in my position as Provincial Fire Marshal, I see no reason why the city's taxpayers should be asked to provide at their cost fire protection for a township whose municipal council refuses to levy any taxes from its township taxpayers for their own township fire protection costs.

In the North Bay case it was not quite the situation of there being no agreement, for there was a limited agreement which provided that the

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township hire fire protection in those instances which were specifically authorized by a number of township officials. In a city, this would be a comparable case of no citizen being allowed to turn in a fire alarm himself but that first he would have to find some member of his city council or city hall staff to turn in an alarm for some burning building. While I can understand that the township rule was imposed to avoid paying for false alarms or for the fighting of grass fires that the township council thought that their own citizens could handle, nevertheless the property loss alone in a case where the fire department was not called in time could well over-balance the costs of false alarms over a period of years. In this present instance, it seems improbable that any delay in securing the official call for the fire deparment had anything to do with the very regrettable loss of life, but conceivably this rule for township approval could under some circumstances result in loss of life or injury which would be difficult to assess in terms of dollars. However, in the final analysis, the township council has the final decision on its by-laws and policies and if they decide not to follow our general policies and recommendations but to impose financial limitations of their own, then that is both their right and their responsibility.

I quite realize that this policy may seem hardboiled, and at times some members of the public may unjustly blame the local fire department. However, we feel that under our Ontario system of municipal operation of fire departments that it is only fair to those who pay for fire protection to get what they pay for and those who are not willing to pay for fire protection do without it until they are prepared to pay for it. Under the combined effect of this policy and the substantial aid the Province gives to the establishment of new fire departments, the number of suburban and rural territories having organized fire protection of their own or else hired is today more than ten times greater than what it was ten years ago. We are working to the time when there will be no island of unprotected territory either through no agreement or an inadequate agreement.

WILLIAM J. SCOTT, O.B.E., Q.C.
Fire Marshal, Province of
Ontario, Canada

Chicago Fights Hot Chemical Fire

The Chicago Fire Department was called upon to help fight a fire in the Witco Chemical Company, in Stickney, Ill. just outside the city limits on June 20th last, which gave fire fighters, responding on a 5-11 alarm, a strenuous struggle.

The fire occurred at 6:11 P.M. The building involved is known as Building No. 30 and is one of a group of structures owned and occupied by the Witco Chemical Company as a warehouse. It is a one-story steel frame, metal clad structure, with a ground floor area of approximately 150 ft. by 250 ft.

The cause of the fire was listed as "undetermined" although one of the owners expressed the belief it was caused by spontaneous ignition of stearic acid (usually prepared from beef tallow by saponification with sulphuric acid, distilling and pressing while still hot). It is widely used in soap and candle manufacturing. As there were about

(*Continued on page* 545)

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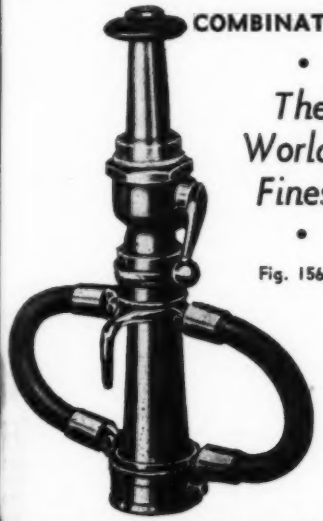

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Studio Fire

(*Continued from page* 498)

one deluge set to handle adequately.

The portable deluge set, with a 1¾ inch tip, must be supplied with three 2½-inch lines for proper operation. However, only two 2½-inch lines were available at first and some time later a third line was hooked into it. At the north end of Sound Stage 21 was a huge set, apparently the one intended for "The Iron Mistress," plus a tremendous number of valuable arc lights. This entire area was later fully involved. The sound stage equipment included many arc lights, valued at from $1,000 to $1,500 apiece, plus camera equipment valued at from $5,000 to $35,000 for color cameras.

The spreading fire caused Truck 60's men to move from the Sound Stage and take up a position outside. The south end of the Stage buckled shortly thereafter. The portable deluge was operated into the Sound Stage and later was used to protect the many exposures with a water curtain.

After the wall buckled, Burbank's two hose wagons operated mounted deluge sets into the ruins to wet down. Chief Nelson said additional portable deluge sets would have been useful at the attack point on the south end of Sound Stage 21.

Engine 60, upon arrival, contacted one of the Burbank chiefs and was ordered to lay and operate two 2½-inch lines on the east side of the fire. A large four-story set building, just east of the main area of the fire, was heavily involved, and Engine 60 made a good stop in knocking the fire down, but not until one-half the building had been gutted.

The fire was brought under control in less than one hour after receipt of the first alarm.

A large residential area outside the studio was the target of many flaming firebrands. The firebrands started many fires but in only eight cases was fire department assistance required to extinguish them. All were roof fires and none caused major damage. Typical roof construction in small frame residences in Southern California is of wood shingles. Householders extinguished many other fires with garden hoses and prevented others by wetting down their wood shingled roofs.

Peculiar to motion picture set properties are great numbers of heavy steel wires and cables stretching across make-believe streets in the Hollywood studios. For filming of night scenes during daylight hours, huge canopies are drawn across these wires and a nighttime effect is produced. Fortunately none of the canopies connected studio buildings at the time of the fire.

During overhauling operations it was noted that steel girders in Sound Stage 21 had twisted and warped like ribbons but wood timbers supporting parts of the building were standing, although deeply charred.

Fortunately, no serious injuries were reported to firemen or the many studio employees who manned lines. The studio's dispensary reported it had treated 12 workmen who suffered slight burns as they dashed into Sound Stage 21 and the nearby sets in attempts to save valuable electrical and sound equipment.

Sound Stage 21 was located only a few feet away from Warner Brothers' large film storage vault where master

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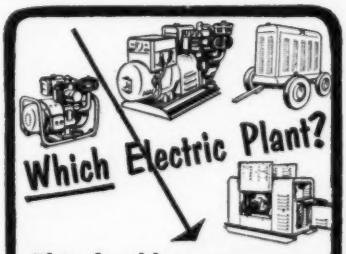

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prints of the studio's films are kept. The vault, constructed of 8 to 10 inch thick steel reinforced concrete walls, was sprinklered. The fire was kept from involving the building.

Fires in film storage containers and vaults are, of course, a major problem in this type of occupancy. Fortunately for the fire service, motion picture studios and other organizations dealing with highly flammable film have decreased this hazard in recent years through proper handling and storage.

The heavy black smoke from the fire attracted thousands of persons. The American Broadcasting Company's Los Angeles television outlet went on the air with an on-the-spot account of the fire. Within an hour after the fire started, the station, WECA-TV, had a remote truck on the scene.

It's an ill wind that doesn't blow somebody some good, however, and studio publicity men and cameramen made the best of the warm spring afternoon. Publicity men posed glamorous stars near firemen and with a backdrop of smoke and flame and begrimed firemen, snapped away for the benefit of movie fans across the country.

Studio cameramen trained their fast-action equipment on the fire and ground away as firemen battled the flames. One cameraman remarked, "We've got enough fire footage here to last us a lifetime!"

Warner Brothers was the site of a $500,000 fire in 1934, when 46 men were hurt, five seriously, as they battled a blaze at the studio. At the 1934 fire, the huge "Chinatown" set was burned to the ground.

Following is the log of alarms for the Warner Brothers Studio Fire, May 16, 1952:

Log of Alarms

12:32 p.m.—ADT Fire Alarm Box 34, Stage 3, Warner Brothers Studios. Engine 2, Hose 5, Rescue 4 and Assistant Chief Mack Darnaby.

12:33 p.m.—Engine 2, one mile away from fire scene, radioed en route via KMA-345 that much more help would be necessary because they could see lots of fire and black smoke.

12:33 p.m.—ADT Fire Alarm Box 64, Cutting Room.

12:33 p.m.—Engine 1, Hose 4 dispatched.

12:34 p.m.—ADT Fire Alarm Box 42, Stage 1.

12:36 p.m.—ADT Fire Alarm Box 62, Administration Building.

12:40 p.m.—Engine 5 dispatched.

12:41 p.m.—ADT Fire Alarm Box 312, N.W.C., Stage 5, received.

12:43 p.m.—ADT registered a closed gate valve at Warner Brothers Studios.

12:45 p.m.—Engine 1-A dispatched.

12:45 p.m.—Glendale Fire Department notified as per mutual aid pact. Two Glendale engines dispatched. One located in Burbank Station 1. The other patrolled area around fire to fight incidental fires.

12:50 p.m.—Burbank Reserve 3, a tank unit, dispatched.

12:53 p.m.—Westlake Alarm Office of Los Angeles City Fire Department

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dispatched Engine 76, per request of Battalion Chief Lynn Nelson, 14th battalion.

12:53 p.m.—Van Nuys Alarm Office of Los Angeles City Fire Department dispatched Engine 60 and Truck 60, per request of Chief Nelson.

12:53 p.m.—Los Angeles County Fire Board received request for one engine. Dispatched Engine 60.

New York Chiefs

(*Continued from page* 505)

Hon. William J. Scott, Fire Marshal, Province of Ontario.

The afternoon was given over to a field demonstration of high capacity water fog nozzles at Holmes Crossing. This was conducted as a Broome County Mutual Aid drill under the direction of Chief E. S. Young, Broome County Fire Coordinator and officials of the Binghamton Fire Department.

Notwithstanding a strong west wind, the seven large capacity fog nozzles, operating off 3-inch lines, delivered in excess of 5,500 G.P.M. As the illustration shows, water was lifted from the Chenango River to pumpers and in turn relayed through short lengths to the two aerial ladders with their three fog nozzles each, and to the jumbo nozzle located between the ladders.

The following were elected to head the Association for the coming year: Frank Love, Painted Post, President; Chief Louis J. Mosher, Elmira, first vice-president; Chief Lee Hunt, Middletown, second vice-president; Chief Henry Drake, Clinton Corners, Secretary-Treasurer.

Chemical Fire

(*Continued from page* 542)

5,000 pounds of stearic acid in flax form on the floor in one section of the building, it is possible that some chemical reaction occurred in this material because the first evidence of fire was found in that location. It was also reported that a large number of drums of napalm, used in the manufacture of incendiary bombs for the U. S. Government, were found in the vicinity.

Evidently the fire communicated to this material, as there were numerous, intermittent explosions for several hours, and a terrific amount of fire resulted.

As the plant is located outside the Chicago City limits, there was a serious shortage of water, which necessitated placing fire department pumpers in line for considerable distances. Consequently, under these handicaps the activities of the fire department were confined mainly to preventing the hot fire from communicating to naphtha storage tanks which were located in close proximity to Building No. 30. Fortunately, the fire was kept from communicating to other structures. Loss to the building and contents is estimated at $300,000.

The following Chicago Fire Department forces responded to the 5-11 alarm: 3 Ladder companies; 19 Engine companies; 3 Squads; 2 Light trucks; 1 Ambulance; 2 High Pressure units; 1 Insurance Patrol and 6 supervisory cars, including 6 Battalion Chiefs, 1 Division Marshal, 1 Deputy Fire Marshal and 1 Acting Chief Marshal.

Acknowledgment: Appreciation is extended Chief Frank C. McAuliffe, Chicago Fire Insurance Patrol, for the data upon which this report is based. The Cover of this issue pictures operations at this fire.

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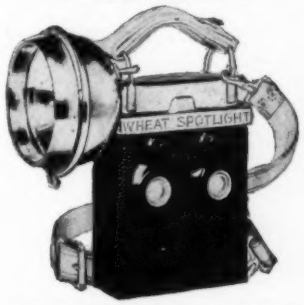

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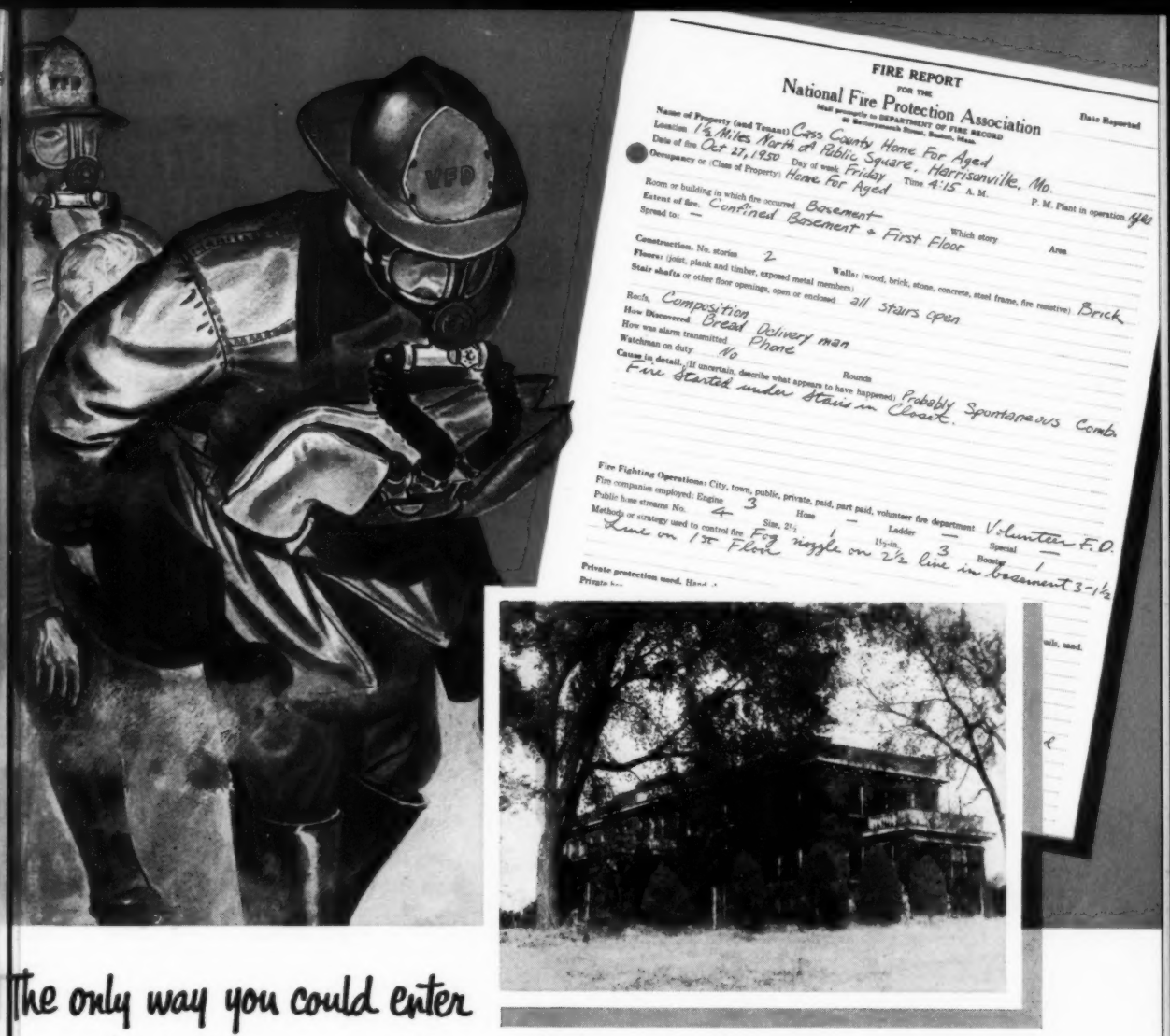
ADVERTISING INDEX

FIRE ENGINEERING

JULY, 1952

	Page
American District Telegraph Co.	513
American-LaFrance-Foamite Corp.	492
American-Marsh Pumps, Inc.	489
American Rubber Mfg. Co.	522
Ansul Chemical Co., Fire Extinguisher Div.	515; 537
Arguslite Co.	540
Atlas Safety Equipment Co., Inc.	541
Bar-way Mfg. Co.	531
Bean Div., John; Food Machinery & Chemical Corp.	487
Biersach & Niedermeyer Co.	493
Blackinton & Co., Inc., V. H.	518
Body Guard Mfg. Co.	543
Braxmar Co., C. G.	536
Briggs & Stratton Corp.	523
Cairns & Bro.	542
Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp.	545
Carpenter Manufacturing Co.	542
Circul-Air Corp.	542
Darley & Co., W. S.	539
Dayton Fire Equipment Co.	540
Duo Safety Ladder Corp.	482
E & J Manufacturing Co.	484
Elkhart Brass Mfg. Co., Inc.	546
Emerson Co., J. H.	Inside Front Cover
Eureka Fire Hose Div., U. S. Rubber Co.	511
Everson-Ross, Inc.	541
Fabric Fire Hose Co.	421
Federal Enterprises, Inc., Signal Div.	479
Fire-Lite Alarms	543
Fogg-It Sales Co.	533
Four Wheel Drive Auto Co.	Back Cover
Fulton Bag & Cotton Mills	534
Gamewell Co.	494
Gerstenslager Company	530
Globe Manufacturing Co.	539
Goodrich Co., B. F.	483
Gorman-Rupp Co.	528
Hale Fire Pump Co.	535; 537
Hannay & Son, Inc., Clifford B.	488
Howe Fire Apparatus Co.	531
Janesville Apparel Co.	541
Kidde & Co., Inc., Walter	517
Koehler Mfg. Co., Inc.	545
McIntire Brass Works, F. N.	543
Marine Products Co.	530
Memco Aerial Ladder	540
Midwestern Mfg. Co.	521
Mine Safety Appliance Co.	Inside Back Cover
Myers & Bro. Co., The F. E.	534
National Foam System, Inc.	486
Oberdorfer Foundries, Inc.	526
Onan & Sons, Inc., D. W.	538
Pacific Marine Supply Co.	532
Perfex	545
Portable Light Co., Inc., The	527
Powhatan Brass & Iron Works	533
Pyrene Mfg. Co.	524
Radio Corp. of America	525
Rockwood Sprinkler Co.	491
Russell Uniform Co.	545
Safety First Products Corp.	527
Scott Aviation Corp.	519
Seagrave Corp., The	485
Smith & Co., D. B.	529
Stephenson Corp.	535
Sterling Siren Fire Alarm Co., Inc.	538
Union Carbide & Carbon Corp., Carbide & Carbon Chemicals Co.	545
U. S. Motors Corp.	543
Ward LaFrance Truck Corp.	490
Wardlaw, John F.	528
Welders Service Co.	540
Wentworth-Forman Co., The	541
Wirt & Knox Mfg. Co.	532


FIRE REPORT
FOR THE
National Fire Protection Association
Name of Property (and Tenant) Cass County Home For Aged
Location 1½ Miles North of Public Square, Harrisonville, Mo.
Date of fire Oct 27, 1950 Day of week Friday Time 4:15 A. M.
Occupancy or (Class of Property) Home for Aged
Room or building in which fire occurred Basement
Extent of fire: Confined Basement & First Floor
Spread to: —
Construction. No. stories 2
Floors: (joist, plank and timber, exposed metal members)
Stair shafts or other floor openings, open or enclosed all stairs open
Roofs Composition
How Discovered Bread Delivery man
How was alarm transmitted Phone
Watchman on duty No
Cause in detail. (If uncertain, describe what appears to have happened) Probably Spontaneous Comb.
Fire Started under stairs in Closet.
Fire Fighting Operations: City, town, public, private, paid, part paid, volunteer fire department Volunteer F.D.
Fire companies employed: Engine 3 Hose — Ladder — Special —
Public hose streams No. 4 Size, 2½ 1½-in. 3 Booms 1
Methods or strategy used to control fire Fog nozzle on 2½ line in basement 3-1½ Line on 1st Floor
Private protection used.

The only way you could enter the building was with one of these Self-Contained Masks"

Said George M. Allen—Fire Chief, Legionnaire Fire Department, Harrisonville, Missouri

Heavy smoke was pouring from the basement and first floor doors and windows of the Cass County Home for the Aged when Fire Chief Allen and his crew of 25 volunteers reached the scene—just 3½ minutes after they had received the alarm.

"Nine people were still in the building," Allen stated in his report to the National Fire Protection Association. "We had two Chemox Masks. The only way you could enter the building was with these Self-Contained Masks."

Putting both masks to immediate use, firemen entered the smoke-filled building. Minutes later, four old women and one old man had been rescued from the first floor.

With personnel evacuated, all hands turned to the task of putting out the fire. Here again, M.S.A. Chemox Masks played a vital part. Safe-guarded by this dependable breathing equipment, firemen were able to maintain close-range concentration of "fog" and water. By 6:00 a.m., one and a half hours after the alert, the fire was out.

In the closing paragraph of his modest report, Chief Allen said "I don't know how we would have made out without our two masks. But one lesson we learned was that two masks are not enough."

You're better prepared with an

M.S.A. CHEMOX

The Chemox Mask can be donned in a matter of seconds to permit immediate entry and work in unbreathable or oxygen-deficient atmospheres with complete respiratory safety, because Chemox makes its own pure oxygen as the wearer breathes, from an economically replaceable canister. Non-fogging lenses—no high pressure cylinder lines, or fittings. U. S. Bureau of Mines approved for 45 minutes minimum service per canister. Write for bulletin No. B-14

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SAFETY EQUIPMENT HEADQUARTERS

Call the M·S·A man on your every safety problem . . . his job is to help you.

Pickering Township, Ontario chooses

Here's a fire-protection team that will travel anywhere in any weather. Pickering Township chose the water carrier and the FWD Model FR60-T Triple Combination Pumper to insure superior and reliable performance. The pumping unit's equipment includes a 2-stage centrifugal pump with a 600 g.p.m. capacity, a 600-gal. booster tank, 150' of 4-ply hose on a single reel, a partitioned hose body which can accommodate 500' of 2½" hose and 1000' of 1½" hose, three lengths of 10' x 4" hard suction hose, plus auxiliary fire-fighting equipment.

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Throughout the nation, the trend is to FWD Fire Engines. In both rural and urban communities, crews know they can depend on four-wheel-drive traction to help save time on every run. FWD provides maximum safety for crews, equipment *and* other vehicles. FWD equipment and accessories also deliver extra action and dependability at the blaze.

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SAFER CONTROL IN TRAFFIC — Start faster. Positive control permits greater speed. Avoid accidents because 4-wheel-drive assures superior steering.

REACH OUT-OF-THE-WAY PLACES — Get through to water supply in hard-to-reach sections. Drive over terrain that stops the conventional fire truck.

FULL CONTROL ON SNOW AND ICE — With front wheels pulling and back wheels pushing—drive swiftly, safely over icy or snow-blocked streets and roads.

STEEP GRADES, MUD, SAND NO OBSTACLE — Drive hub deep through sand or mud. Pull up steep, slippery grades without losing speed. Save valuable time.

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